

REPORT
OF THE
SECRETARY OF THE INTERIOR,
COMMUNICATING

The report of John Claiborne, esq., special agent appointed to collect statistics on the consumption of cotton in Europe.

MARCH 22, 1858.—Read and ordered to lie on the table

MARCH 23, 1858.—Motion to print referred to the Committee on Printing.

MARCH 30, 1858.—Report in favor of printing 5,000 copies in addition to the usual number, submitted, considered, and agreed to.

DEPARTMENT OF THE INTERIOR,
March 19, 1858.

SIR: I have the honor to transmit herewith the report of John Claiborne, esq., the special agent appointed by the Commissioner of Patents to collect and report information upon the consumption of cotton in Europe.

Annexed to that portion of the report which relates to Bremen will be found a memoir upon the consumption of cotton in the Zoll Verein, for which the department is indebted to the courtesy of Doctor Schleiden, minister resident from the Free and Hanseatic Republic of Bremen.

With great respect, your obedient servant,

J. THOMPSON,
Secretary of the Interior.

Hon. JOHN C. BRECKENRIDGE,
President of the Senate.

UNITED STATES PATENT OFFICE,
March 19, 1858.

SIR: Agreeably to the clause in the act of Congress of March 3, 1857, for the collection of agricultural statistics, investigations for promoting agriculture and rural economy, and the procurement and distribution of cuttings and seeds, and to enable the Commissioner of

Patents to collect and report information in relation to the consumption of cotton in the several countries of the world, I have the honor herewith to transmit the report of John Claiborne, the agent appointed to collect the cotton statistics of Europe under the clause in said act.

Very respectfully, your obedient servant,

J. HOLT, *Commissioner.*

Hon. JACOB THOMPSON,
Secretary of the Interior.

DEPARTMENT OF THE INTERIOR,
May 11, 1857.

SIR: A recent appropriation having been made by Congress "to enable the Commissioner of Patents to collect and report information in relation to the consumption of cotton in the several countries of the world," you have been selected to aid in carrying out the objects of that appropriation.

To render the desired information more reliable and complete, it has been judged expedient that you should visit different portions of Europe; and, as it is important that the result of your investigations should be laid before Congress at an early day of its next session, it will be necessary that you should commence your labors with the least possible delay.

Time will not permit you to visit all the countries in the world where cotton is consumed, nor would such a course be expedient if it were practicable. You will probably be able to extend your personal observations to the most important points in England, France, Russia, Switzerland, Austria, Prussia, and perhaps some of the other countries of Europe. You will here find sources of information extending to all quarters of the globe, and which will be sufficient to satisfy the present expectations of Congress.

Though the *consumption* of cotton abroad is the great subject of inquiry, your attention should not be limited too narrowly to that one point. It is evidently the intention of Congress to ascertain all facts which have a bearing, either directly or indirectly, upon that matter. The ultimate design is to benefit the cotton producing and cotton manufacturing interest of the United States.

Whatever will tend to this end is a subject of practical importance, and is recommended to your earnest and careful attention.

The traffic in this commodity, its manufacture, and even its production in foreign countries, have a bearing upon its consumption, either present or prospective, and all facts relating to any of these matters will be within the proper scope of your inquiries.

Perhaps the clearest and most intelligible course of investigation will be suggested by an attempt to trace a bale of cotton from the time it leaves the plantation of the producer till it reaches the hands of the ultimate consumer. Every mile by which this route can be shortened, every obstacle which can be removed or avoided, every cent of expense

which can be saved, are advantages the benefits of which will be shared between the two individuals who stand at the extremes of this line of transit, and will cause not only an augmentation in the price of the raw material, but will create a larger consumption, and thus call for a larger supply of the commodity.

This, and subjects naturally connected therewith, will suggest all material inquiries which will be necessary in order to satisfy the objects of the appropriation.

In carrying out the general design thus intimated your own judgment and sagacity will be chiefly relied upon.

It is impossible to mark out with precision, beforehand, all the details of an investigation where the ascertainment of one fact will often suggest others and render them material, where unexpected items of information will frequently present themselves, and where those which were anticipated will often be found to be beyond reach. It is thought proper, however, to specify, with greater particularity, some points and suggestions which have been already referred to in a more general manner.

The following points are, therefore, presented, as proper guides for your attention and inquiry, and as embracing chiefly, if not entirely, the grounds you are expected to examine.

1. Ascertain the amount of cotton consumed in the manufactories of each city, district, or country, either in Europe, or any other portion of the earth where cotton is manufactured; the amount of capital invested in such manufacturing establishments; the number of looms and spindles; the number of hands employed, and the average rate of wages paid to the employés. Aggregate results for each country or district are desirable, as far as practicable.

2. The immediate sources from whence these establishments actually procure their raw material; the nearest seaport where they might be furnished direct from the United States, and the diminution of cost which might be effected by any change in the course of trade.

3. If direct trade were established, what are the commodities we should receive in exchange. Would this be sufficient in amount to furnish adequate return freights for the vessels employed in the transportation of cotton.

4. What proportion of the supplies furnished to these establishments is in the shape of yarn, and what in the shape of raw cotton. Ascertain the price of each, in order to show what profit is made by the manufacturer of the yarn.

5. What is the quality, grade, or number of the yarn principally used, and is it such as could be produced by the unskilled labor on plantations, or in the southern cities.

6. To what countries do the manufacturers of Europe generally send their yarns and goods, and what diminution of expense would result from manufacturing or spinning in our own country, and shipping direct to those countries.

7. What duties are levied on cotton or yarn respectively; their effect on the consumption of each; the feasibility of procuring their remission or modification, and the probable effect on consumption of such remission.

8. What are the agencies in each country which are now tending either to advance or check the consumption of cotton.

9. What new modes of applying cotton to the use of man are now in use in Europe; to what extent is it used for mixing with wool in making cloths, cordage, or for any other purpose.

10. What proportion of the cotton goods consumed in each country is imported, and what supplied at home.

11. Examine the subject in its financial aspect; inquire how, in the actual operations of commerce, a merchant could have his orders for cotton executed, and pay therefor at the ports of exportation. Examine also into the nature and course of exchange operations that would thus arise, and the practicability of avoiding the necessity of English or French banking credits.

12. Direct some attention to the subject of the production of cotton in foreign countries, with a view of ascertaining whether our planters may apprehend any formidable competition from any such source; what are the obstacles in the way of such foreign production, and are they such as are likely to be removed hereafter.

It is not intended in the suggestion of the foregoing points to limit you rigidly by them. They are intended to aid, and not restrain investigation. Any other matters which may suggest themselves to your mind, calculated to promote the general object in view, should be made the subjects of inquiry. Nor is it supposed that upon each and all of the heads above enumerated full and explicit information can be obtained. Where this is found impracticable, or very inconvenient, time should not be wasted in fruitless searches.

You will keep this department constantly informed of your movements, and by what channel of communication you are to be addressed, in case further directions or suggestions be thought expedient.

J. THOMPSON,
Secretary of Interior.

JOHN CLAIRBORNE, Esq.

REPORT.

To the Hon. Joseph Holt, Commissioner of Patents :

SIR : Congress having, at its last session, made an appropriation for the collection, under the direction of your bureau, of statistical information as to the consumption of cotton in the various countries of the world, the undersigned received from the honorable the Secretary of the Interior the appointment as agent to carry out the intention of the legislative department.

It was soon recognized that the amount of the appropriation was wholly inadequate to the investigation of the subject, in the manner and to the extent warranted by its importance, in either the agricultural or commercial point of view ; and, under these circumstances, I was directed to proceed, without unnecessary delay, to France and other continental countries of Europe, and, with all practical despatch, collect as much information as it might be in my power to do previous to the re-assembling of Congress.

On my arrival at Paris, about the beginning of June last, I called upon the Hon. John Y. Mason, the minister of the United States to the French empire, and made known the object of my visit. He received me most cordially, and, throughout my stay in Europe, manifested the warmest desire to forward the object of the investigation by procuring for me facilities, not only in France, but elsewhere. Mr. Alexander Vattermare, agent of the patent office at Paris, also cheerfully aided me, and was the means of procuring for me much valuable information, not only at the capital, but in the manufacturing districts of Mulhouse.

Below will be found the results of the investigation, so far as it has been carried on, under the head of the countries visited. On no point is the information obtained so full and detailed as it might have been made under more favorable circumstances, or as it should be for the proper understanding of the subject, while, on some points of the instructions, it has been wholly impracticable, from want of time, to procure any reliable information.

This cause prevented an examination into the amount of consumption and the condition of cotton manufacture in Holland, Bavaria, Wurtemberg, and Spain, which last country has, during the past few years, required a largely increased supply of our cotton for the spinning mills of Catalonia.

FRANCE.

France ranks next after Great Britain in the quantity and value of the cotton wool consumed, while the variety of articles into which it is fabricated is much greater. In the taste and beauty of her tissues she justly claims the first place among modern nations. Her mills

send forth every description of cotton goods—from the common calicoes of Rouen to the richly figured muslins of Mulhouse, the gossamer tulles of Saint Quentin, and the exquisite tarlatanes of Tarare.

Scarcely sixty years have passed away since the first attempts at cotton spinning were made at Paris, at a period, too, when the first French revolution was about to shake the country to its centre, to overthrow the old political system, to convulse society, and to affect for a time, at least, most injuriously all the material interests connected with it. The progress of this new industry was, therefore, but slow for a considerable number of years after it was first planted.

From Paris cotton spinning spread rather gradually towards the departments of the north and east. According to Moreau de Jonnés, (*Statistics of the Industry of France; Paris, 1856,*) the first mule jenny used in France was imported from England into Ghent, (recently acquired by the French arms,) by the Brothers Bauwen, and presented to the first consul.

The first cotton spinning in the department of the east, of which Mulhouse is now the central point, and which embraces portions of ancient Lorraine and Alsace, was in the establishment of Wesserling, in the year 1803, and specimens of yarn spun, either by hand or by the mule jenny, were exhibited at the *Exposition* of 1806; from which date it was recognized as “one of the established ‘industries’ of the country, and the fabrication of cotton rapidly became one of the leading interests, rivalling in its importance and value, in the commercial movements, that of the cereals.”

In 1816, the kilogramme of raw cotton was, as stated by Moreau de Jonnés, worth six francs, or about \$1 12; and in 1851 it had diminished to 1 franc and 50 centimes, or about 28 cents, “and four times the quantity of cotton fabrics can be had for the same sum of money, while the proportion of 5 kilogrammes, or 11 pounds of cotton to every five inhabitants, had increased to 2 kilogrammes, or $4\frac{2}{5}$ pounds to each inhabitant; or, in its manufactured state, was sufficient to have furnished every inhabitant of the country with 18 metres, or about 20 yards of ordinary calico.”

With respect to its cotton manufactures, France may be considered as divided into three great groups or districts, although there are many spinneries, weaving, bleaching or other establishments, not within the limits of either. These groups or “circles,” as they are generally called by the French manufacturers, or merchants, are: Normandy, of which Rouen is the centre; the east, with Mulhouse; and the northeast, with its cities of Saint Quentin, Roubaix and Lille. Each of these circles has its reputation for the production of particular descriptions of fabrics or tissues; thus Rouen is famed for the coarser styles and low prices, and is called the workshop of the poor; Mulhouse is famed for its Indiennes and its printed muslins, unrivalled, it is said, for beauty and richness of texture and coloring, and the taste displayed in their designs, by those of any other fabrication; Saint Quentin sends out the finest descriptions of tulles, organdies, &c.; while Lille and Valenciennes are the seats of the lace manufactories.

Tarare, near Lyons, has of late years sent into the Parisian markets

the most beautiful and costly tarlatanes and embroideries, in the latter respect rivalling the renowned fabrics of St. Gall and Appenzell, in Switzerland; and Calais is following fast in the footsteps of Nottingham, in the production of bobbinets, and that description of laces for which the latter city has so long enjoyed a high degree of celebrity.

It was not in my power to obtain precise details of the establishment and progress of cotton manufacture in any of the above named circles save that of the east; and these are owing to the courtesy of Mr. Emile Dolfus, president of the Industrial Society of Mulhouse, who furnished me with a copy of his very valuable and interesting *notes*, read before that body in the months of November and December, 1856, and which show, on every page, that they are the result of the most careful and conscientious study and examination into the subject.

After cotton spinning was introduced in 1803, it remained nearly stationary until 1809-'10, when it began to increase in importance, and water power was first substituted for hand labor; the use of steam not being known until 1812, in the mill of Messrs. Dolfus, Meig & Co. The next five years brought with them wars, invasions, and political changes and excitements, which affected injuriously all kinds of industry. Between 1818 and 1825, prosperity had returned, and new and numerous establishments had been erected and put in operation; commercial derangements in 1828, and the revolution in 1830, had in turn, their disastrous influence, which was again felt by the money crisis of 1837, and 1842-'43. Since 1851, the march has been rapid, and the business has met with its fair share of success and profit until the crisis of the present year, 1857, came on, under which it will have to share the suffering undergone by all manufacturing interests throughout Europe and America; a suffering which will, in all probability, be but temporary, to be succeeded by a long course of prosperity for them all.

Cotton weaving began in this circle, at Mulhouse, in 1746, the first articles manufactured being *Indiennes*, the thread used being spun by hand, those spun by machinery not coming into use until more than half a century afterwards, in the year 1800; and the flying shuttle being first employed in 1805. Shortly after this latter period the importation of cotton tissues into France was prohibited; a policy which has been maintained to the present day, amid all changes of government, and to even a modification of which the mill owners, with the rarest exceptions, manifest a stubborn spirit of opposition.

Weaving made as much progress, undergoing the same occasional and temporary reverses, as spinning and other branches of cotton manufacture; it extended gradually from the department of Haut Rhin into the other five which composed the circle, the mill owners generally adopting with readiness all new inventions in that branch, and the old system of hand looms disappeared before power looms, worked by water or steam, until in 1856, of the total number of looms in the district, forty-two thousand three hundred and twenty-nine, (42,329) there were 33,472 power, and only 10,859 hand.

Cotton printing was established in Alsace at Mulhouse at the same

time as weaving, and shortly attained to that reputation for the quality of its products which it has ever since enjoyed.

In connexion with many of the printing establishments are those for bleaching and dressing goods. The extensive establishment of Dolfus, Meig & Co., at Mulhouse, combines all the processes which the raw material undergoes from the time it reaches the mill doors until it is despatched to market; and within its walls one may witness spinning, weaving, plain and figured, bleaching, (by a process considered by many superior to any elsewhere to be found,) dyeing and printing, (both by block and cylinders,) dressing and packing for market. Its chief is Mr. Jean Dolfus, who not only received your agent with much politeness, but manifested great interest in the subjects of his inquiry, and a disposition to afford him all possible information in its various branches.

According to Mr. Emile Dolfus, in the publication above alluded to, there are now in the circle of the east, which comprises the departments of Haut Rhin, Bas Rhin, La Haute Saône, Doubs, Les Vosges, and La Meurthe, 109 spinneries, worked, 74 by steam and 97 by water, with an aggregate horse power of 8,199. These establishments have a total of 1,498,440 spindles for ordinary yarns, and 16,886 for twist, which makes the proportion of 183 to each unit of horse power; or if, as Mr. Dolfus remarks, it is considered that many of the steam engines are only auxiliary to water, which is subject to changes in its force and volume, the proportion will be really somewhat less.

The general proportion of spindles for ordinary numbers of yarns, 27-29 for warp, and 36-38 for woof, is from 180 to 200 for each unit of horse power.

The spindles were used as follows :

For waste and numbers under 20.....	75,000
Ordinary numbers 24 to 40, warp or woof.....	1,000,000
Numbers between 40 and 70.....	75,000
Fine numbers from 70 to 200.....	350,000

The productions of yarns was 44,000,000 pounds, equal in value to \$13,020,000, or 37 $\frac{1}{5}$ cents the pound.

The number of workmen employed by these establishments was 29,995; the wages paid, as I was informed by a mill owner, an average of three francs for men; for women two francs; and for boys and girls from twenty centimes to one franc, per day.

Mr. Dolfus estimates the annual cost of spinning, per spindle, at an average of 35 francs, or \$6 51. He also gives a table of the prices of raw cotton at Mulhouse since the year 1811, when it was 14 francs 85 centimes the kilo, or about \$1 33 cents the pound, to 1856, when it had fallen to the average of 2.02 francs the kilo, or 12 cents the pound, for the classifications used in spinning ordinary yarns.

In 1811, the average price of the yarns at Mulhouse (27-29 warp and 36-38 woof) was 25 francs 61 centimes the kilo, or about \$2 33 the pound, from which it had fallen, in 1856, to three francs the kilo, or 23 cents the pound.

The number of weaving mills in the circle in 1856 is placed at 136, employing 37,897 hands, of whom 25,104 are engaged on power, and

the remainder on hand looms. The production of cloths had increased from two million pieces of 130 million of metres, or 140,833,333 yards, to two and a half million pieces, of a total of 250 million metres, or 270,833,333 yards.

It had almost doubled during the last decade, and its value was set down at 100 million of francs or 18,600,000 dollars; the average price for ordinary calicoes in the Mulhouse market, which in 1835 was 77½ centimes, or near 14 cents the metre, had fallen to 39 centimes, or near eight cents.

There were 25 printing mills, employing 10,400 hands, printing 51,900,000 metres of stuffs (or 56,225,000 yards) of the value of 51,500,000 francs, or \$9,579,000.

Mr. Dolfus thus sums up the condition of the cotton manufacture in the circle in 1856, as regards capital invested and the ordinary expenses of working, &c., francs being reduced into American dollars. The entire number of hands employed being 78,812, and the motive power that of 14,323 horses :

Spinning, at a mean average of \$6 51 per spindle, for 1,513,306 spindles, say.....	\$9,750,746
Weaving, by mechanism, at \$139 50 the loom, of which there were 33,472.....	4,670,340
Weaving, by hand, at \$22 32 each, for 10,875 looms, buildings and machinery included	231,800
Printing	2,418,000
Bleaching and dressing.....	372,000
Total	<hr/> 17,442,886 <hr/>

These establishments had cost at least 29,760,000 dollars; the wages yearly paid to their hands amounted to 6,596,000 dollars; and the annual value of all their different productions, amounted to forty-one millions, four hundred and seventy-eight thousand dollars, (\$41,478,000.)

By far the greater portion of cotton-wool consumed in the circle of Mulhouse is of American growth, and "middling" to "middling fair" qualities; there is some Sea Island and Egyptian also used; but Brazilian, East Indian or other growths are but little known. Nearly the whole of the raw material goes *via* Havre, and thence by railway. Fuel is scarce and dear, the coal which is used being brought from Burgundy, along the canal which connects the Rhone and the Rhine, or from Coblenz, on the latter stream. Under the most favorable circumstances it is said to cost three times as much as in England. Labor is, however, abundant; and while they admit that they can never rival England in ordinary and cheap cotton fabrics, and must depend upon the superior quality, taste and elegance of their fabrics, for a profitable market, the Mulhouse mill-owners are, as a general thing, well pleased with their business and the profits which it affords.

It is to be regretted that there has not as yet appeared in the circle of Rouen any one who, like Mr. Dolfus, at Mulhouse, is the historian

and statistician of its great manufacturing interests, as it is certainly well worthy, in extent and importance of the effort.

In his very interesting and instructive volume, *L'Industrie contemporaine, ses caracteres et ses progres chez les differents peuples du monde*, Paris, 1856—(Contemporaneous Industry, its characteristics and progress among the different people of the world)—M. Audiganne says of the Normand Group, that if the number of spindles and the amount of raw material which they require, be considered, it is the first in France; as out of the seventy to seventy-two millions of kilogrammes which France consumes, they absorb about thirty millions; and of the five millions of spindles, which he estimates as the actual total in the country, it has between one and a half and two millions, though as regards the value of its products it does not preserve this relative position. While its fabrics are almost exclusively of the heavier and coarse qualities, at low prices, Rouen also manufactures for Algeria a species of very superior bleached cloth, which is in great respect for *burnouses*, &c., among the Arab population. It has also given the trade name of *Rouennaises* to those fabrics of its mills which are composed of yarn dyed before it is woven, the hues of which are often mingled in odd and striking contrast.

The circle of Rouen is composed of the departments of La Seine Inférieure, L' Eure, and Orne.

To the vice president and secretary of the chamber of commerce of the city I am under great obligations for their kindness, and the facilities for obtaining information which they afforded me.

The consumption for the year 1857, of this circle, was estimated at 140,000 bales, of 220 kilogrammes each, or 67,000,000 pounds, of which 15,000 bales, of not over 300 pounds, or the total weight of four and a half million pounds of Surats, &c., was included.

Very little Algerian or Egyptian is consumed, and that of other growths does not seem to be known, or at least asked for, in the market.

Rouen is one of the two points on the continent, at which there was to my mind any evidence of an increase in the consumption of East Indian cotton, and its use for spinning unmixed with the longer stapled and finer qualities of the United States, or other crops. The other point was at Ghent; and at both the reason assigned was, the very high price of American cotton, which compelled the spinners to look for other supplies.

The qualities of American (United States) cottons principally in demand at Rouen are "middlings" and "good middlings;" the waste upon which, for "middling," is 4 to 5 per cent.; on "ordinary," 6 to 7; and in "low ordinary," from 7 to 11 per cent. Of the East Indian cottons, from Bombay, the waste is generally 20 per cent. greater than that of the corresponding classifications of American; the Madras cottons are, however, of better quality than those from Bombay.

In this circle the yarns spun range in numbers between 4 and 36, the bulk of them being, according to a leading spinner, No. 26; the average price for that quality is 3 francs 60 centimes the kilo, or about 22 cents the pound.

It is claimed for the French yarn that it is ten per cent. superior to that

spun in England. The chief export of yarn from Rouen is of No. 20, for warps, which goes to Germany. The wages paid average 3 francs per day for men, and $1\frac{1}{2}$ francs for women and girls. The proportion of the hands employed is two females to one male, and the length of the working day, as at Mulhouse, is 12 hours.

The following tables are derived from a publication of the Rouen Chamber of Commerce, entitled "Statistics of the Maritime Commerce, and the Exportations of Tissues of Cotton and of Wool from the port of Rouen, during the year 1855. Rouen: 1856."

Comparative table of the Tissues of Cotton despatched from the custom at Rouen, either by sea or land, during the years 1853, 1854, and 1855. Kilogrammes reduced to pounds.

Description of tissues.	Quantities exported to the colonies in—		
	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Rouenneries	855,496	718,947	943,182
Indiennes	788,452	704,846	776,987
Handkerchiefs	5,584	12,648	86,277
Calicoes	5,912,275	5,864,773	7,288,877
Total	7,561,807	7,301,214	9,995,323

In the above are not included the cotton yarns exported, which amounted, in 1853, to 82,244 pounds; in 1854, to 69,980 pounds; in 1855, to 69,705 pounds.

Quantities exported to foreign countries.

Description of tissues.	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Rouenneries	226,666	259,510	357,577
Indiennes	334,290	234,087	283,050
Handkerchiefs	16,969	12,597	58,014
Calicoes	23,235	11,589	74,098
Total	601,160	517,783	772,739

Totals for colonies and foreign countries.

Description of tissues.	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Rouenneries	1,782,142	978,457	1,300,759
Indiennes	1,122,741	939,013	1,060,037
Handkerchiefs	22,552	22,245	144,291
Calicoes	5,937,509	5,876,363	7,362,978
Total	8,864,944	7,816,078	9,868,065

Of these exportations, there came to the United States, in the year 1853, 55,748 pounds; in 1854, 47,828 pounds; and in 1855, 69,179 pounds; the values not being given.

The mills in Brittany, like those of Normandy, supply only the lower numbers of yarns and cheap stuffs; those of French Flanders, on the contrary, turn out the finest and most costly description of tulles, blondes, and gauzes, and it is there that is consumed almost the entire importation of our sea-island cottons. It has not been long since the artisans of Tarare began to send into market those exquisitely fine and beautiful fabrics of cotton which have won the admiration of all who behold them. In cotton embroideries Tarare produces articles "quite equal to the best Swiss in fineness, suppleness, and finish; and superior to them in the chasteness and beauty of their patterns." The perfection of the skill and taste they display in the finer and more costly styles of cotton stuffs may be appreciated from the fact, as stated by M. Audiganne, that when the society of churchwardens of Nancy desired to present an embroidered robe to the Empress Eugenie, they procured it to be made at Tarare, the threads being number 480, and the amount of raw cotton used for it being half a kilogramme, or one and one-tenth pounds. If, says M. Audiganne, the thread used for this robe, and coming from so small an amount of material, had been extended in a line, it would have reached 480 kilometres, or 120 leagues. This distance is nearly equal to 291 English miles.

But by far the greater portion of the yarn spun and woven in France is of the numbers running from 12 to 80, the use of any above the latter being considered as exceptional; as a matter of economy in their operations, the mill owners regard the spinning of 50 kilogrammes of cotton into the finer numbers, as requiring as much labor as to turn from 700 to 800 kilogrammes into the lower ones. Up to the year 1834, the importation of yarns was prohibited; and since that date the relaxation of the policy only operates in favor of those above No. 143, the duty upon which is regulated by weight.

Of late years the production of yarns in France has not only sufficed for home consumption, but has also been exported in considerable quantities to other countries.

M. Moreau de Jonnés, in his late very valuable work, "*La Statistique de L'Industrie de la France*," (Statistics of French Industry,) has a chapter on cotton which abounds in interesting facts and speculations. After giving a rapid sketch of the rise and progress of the manufacture in France, the author proceeds to show its influence upon the industrial and commercial wealth of the country, as it at present exists. According to this high authority, the value of the production of cotton tissues, and its relation to the population, was, in the year 1812, 176,000,000 of francs, or \$32,736,000, being 6 francs, or \$1 12, to each inhabitant; while in 1850 it was 334,000,000 of francs, or \$62,124,000, being 10 francs to each inhabitant. By the census of 1851, the population of France was 35,783,170. Says M. de Jonnés, p. 76, "The 62,000,000 (kilogrammes) imported for the spinneries, being transformed into tissues and other fabrics, worth at least 334,000,000 of francs, the industry of our manufactures quintuples

the value of the raw material, and augments it four times; or, in other words, gives it an increased value of 250,000,000 of francs." Estimating the total consumption by Great Britain, Continental Europe, and the United States, at the time he was writing, (probably 1855,) at the round sum of 502,000,000 kilogrammes, or 1,104,400,000 pounds, he says: "At 1 fr. 50 centimes (the kilogramme) here is a value of 753,000,000 (or \$140,058,000.) If the raw material should be everywhere quintupled, as in France, the annual industrial production of cotton would be near 4,000,000."

"Certainly, when Columbus remarked at the Lucayas a bush with mallow flowers, the seeds of which were enveloped in a silky down, he did not anticipate that *there* was a treasure far more precious than the gold mines of Cibao, and that it would have been better for him to have put the Indians to planting cotton, than to digging into the auriferous hills of Hayti, which were to become their tombs."

M. de Jonnès gives tabular statements as to each branch of cotton manufacture in France, which are embodied herein as well worthy your attention. For convenience sake, the French weights and values have been reduced to our own standards. His estimate of the number of spindles is considerably below that of several other authorities—M. Audiganne placing the number at 5,000,000.

COTTON SPINNING.

Number of mills.....	566
Communes in which they are found.....	275
Their consumption of raw material, (lbs.).....	138,226,000
Value of the same.....	\$17,519,756
Quantity of cotton spun, waste not included, (lbs.).....	127,600,000
Total value of the yarn spun.....	\$27,379,200
Number of hands employed.....	63,064
(of whom, 22,807 men, at 37 cents; 23,531 women, at 19 cents; and 16,726 children, at 10 cents per day.)	
Raw material per centum.....	.65
Salaries, general expenses, and profits, do.....	.35

NOTE.—The rate of wages given here is at least one-third below those which, I was informed by proprietors, were paid at Mulhouse and Rouen. They had probably risen meanwhile.

Summary of the value of the general production of cotton tissues.

Cotton tissues.	No. of establishments.	Value of raw material, (cotton yarn.)	Value of productions.
Cotton, pure.....	1,484	\$18,385,082	\$30,448,200
Cotton, open work.....	46	1,004,400	2,697,000
Cotton, mixed.....	195	6,942,450	10,387,914
	1,725	26,321,932	43,533,114
Subordinate articles.....	11	288,114	395,623
Total.....	1,736	26,610,046	43,928,737
Accessories to unmixed tissues.....	287	10,977,714	15,427,148
Accessories to mixed.....	17	807,612	1,755,282
Total.....	304	11,785,326	17,182,430
General total.....	2,040	38,395,372	61,111,167
No. of spinneries.....	566		
	2,606		

Number of workmen and machines.

Cotton tissues.	Hands.	Looms.
Cotton, pure.....	145,474	92,623
Cotton, open work.....	17,377	1,687
Cotton, mixed.....	25,716	16,693
Total.....	188,567	111,003
Subordinate and accessory articles.....	23,299	2,370
Total.....	211,866	113,373
Add for spinneries.....	63,064	16,301
Making altogether.....	274,930	129,673

NOTE.—“The figures (says M. de Jonnés) were obtained by official inquiries at each establishment, being the only ones yet collected on this important subject. Two thousand and forty establishments (continues the author) consume raw material valued at \$38,395,372; their operations, by the aid of 212,000 workmen and 113,000 machines, increase this value to \$61,111,167, or by one-half; and it must not be forgotten that the raw material of the tissues, produced by this admirable and suprising industry, is cotton yarn, to work which costs twice as much as does cotton wool.”

If, to find the total value obtained by the labor of our 2,000 establishments, raw cotton were taken as the basis of the calculation, the

increased value would be found much more considerable. The quantity of 138,226,000 pounds, destined for spinning mills, is worth only \$17,519,756, from which are fabricated tissues worth \$62,012,400—an increase in value equal to 350 per cent.

Cotton is used in France mixed with wool, flax, or silk, in greater or less proportions. It enters into the fabrication of velvets, silk cravats, or vestings, rich moire-antique stuffs, satinets, broadcloths, and linens; and it would seem that the progress of art and the necessity for new materials are destined to add still further to its already multifarious uses. Want of time for that object rendered it impracticable for me to examine particularly into this branch of cotton consumption, either in France or any other country which I visited. It is well worth an extended and careful examination.

According to M. de Jonnès, 212 establishments, employing 26,000 hands, and with the latest and best descriptions of machinery, are engaged in the fabrication of articles of which cotton, mixed with silk, wool, or flax, is a component part. The mills are one-tenth the number of those devoted to weaving pure cotton, and the number of hands is one-ninth of those so engaged.

The work of M. de Jonnès gives the following summaries of the different branches of cotton manufacture in France, after the raw material has been converted into yarn or threads.

1°.—TISSUES OF PURE COTTON.

Number of establishments	1,484	
Value of the spun cotton used in them....	\$18,384,806	
Value of the tissues fabricated.....	\$30,448,200	
Total number of hands employed.....	145,474	
Viz: Men	69,410	
Women	52,932	
Children.....	23,125	
Men, wages, 1fr. 50 centimes, or 28 cents, =	\$3,868,800	
Women, 85 centimes, or 15 cents, =	\$2,247,922	
Children, 50 centimes, or 9 cents, =	645,048	
Looms, 92,623; other machines	2,820	
Spindles	190,336	
Value of articles fabricated.....	\$30,448,200	
Value of cotton yarn and thread.....	\$18,384,896	= 60 per cent.
Profits, wages, and general expenses.....	\$12,090,000	= 40 per cent.
Viz: Wages	\$6,755,148	= 22 per cent.
Profits and general expenses.....	\$5,327,412	= 18 per cent.

2d. Transparent and other tissues.

No. of establishments.		Val. raw materials.	Val. products.	No. of hands.
Tulles	19	\$930,000	\$2,087,292	10,777
Machines	1	8,556	111,600	60
		938,556	2,198,892	10,837
Laces	1	1,012	3,739	400
Embroideries	25	63,984	502,200	6,140
Total	46	1,003,552	2,704,821	17,377

3d. Accessories to the fabrication of tissues.

Bleaching and dyeing	177	\$4,110,600	\$5,601,390	3,859
Printing calicoes, &c	87	5,712,060	8,616,054	10,081
Cambrics	23	1,469,400	2,306,400	3,888
Total	287	11,292,060	16,523,844	17,828

4th. Subordinate articles.

Wadding	1	\$2,790	\$6,510	18
Cords and twist	4	74,400	111,600	180
Candle wick	2	51,336	74,467	135
Fringes and suspenders	4	163,680	204,972	250
Total	11	292,206	397,549	583

5th. Mixed cotton tissues.

Cotton and wool velvets and carpetings	42	\$3,496,800	\$4,964,800	7,043
Cotton and wool network, blankets and furniture covers	16	1,302,000	1,805,198	6,690
Cotton, wool and flax	5	156,498	279,000	685
Cotton and silk	62	669,300	967,200	1,617
Cotton, silk, and goats' wool	25	163,202	316,200	1,170
Cotton, wool, and silk	45	1,171,800	1,957,258	8,511
Total	195	6,959,600	10,289,656	25,716

Accessories to the same.

Cotton and wool spinning and dyeing	15	\$799,800	\$1,729,800	4,748
Dressing	2	11,346	31,248	140
Total	17	811,146	1,761,048	4,888
General total	212	7,770,746	11,050,704	30,604

Looms	16,693
Other machines	7,802
Spindles	71,802

The pure cotton tissues of French fabrication are : Calicoes, Indiennes, percales, gingham, madapolain, jaconet, organdie and figured muslins, printed muslins, handkerchiefs and shawls, tulles, bobinets, laces, bonnetine, (caps, undershirts, drawers, gloves, &c.) and fringes and nankins.

DUTIES.

The French government levies discriminating duties on cotton wool, taking into consideration not only the place of growth, but the mode of transport. A reference to the accompanying table, marked B, will show the amount of the duties levied on each description of cotton wool. The table marked A, and which is official, shows the amount of cotton wool imported into France from all countries during the periods therein named. It will be seen that the amount of duties paid for the year 1856 was \$3,712,286, (19,851,000 francs,) upon a total receipt of 183,488,200 pounds. As to the quantity of cotton of the growth of the United States imported in that year, it will be seen that it paid more than 90 per cent. of the entire revenue from that source.

The *Tableau Général du Commerce de la France* for 1856 places the amount of duties received from cotton imported from the United States at 18,777,229 francs, and the proportion to the whole amount of duties levied on importations from that country, at 90.5 per cent. This document also places the total importation of American cotton wool for that year at 974,793 metrical quintals, (221 pounds,) equal to 215,469,033 pounds; of which, 786,994 metrical quintals, or 173,926,744 pounds, were for consumption, and the balance of 41,543,259 pounds in transit.

The following table, showing the quantity of cotton wool imported into France for the first nine months of the year 1857, with the amount of duty received therefrom, and a comparison with the quantities imported and the duties received for the same periods in the years 1855 and 1856, is made up from an official publication in the *Moniteur Universel*, of October 19, 1857, the French weights and values being converted into corresponding American weights and values :

Importations.	1857.	1856.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
From the United States.....	159,125,083	175,613,672	154,459,331
From other countries.....	21,509,448	12,238,096	13,292,990
Total pounds.....	180,634,521	187,851,768	167,752,521
Taken for consumption.....	121,928,593	140,180,963	135,696,652
Duties received.....	2,976,000	2,820,200	2,659,800
Stock on hand September 30.....	40,807,871	36,691,726	22,322,768

Of which, in 1857—	Pounds.
At Marseilles.....	2,794,103
At Bordeaux.....	360,671
At Nantes.....	462,879
At Rouen.....	267,189
At Havre.....	36,174,385
At Dunkirk.....	181,662
At other ports.....	565,981
Total.....	40,807,871

The accompanying tables, marked, respectively, C, D, and E, all of which are from an official source, will exhibit—

1st. The quantities and values of the various descriptions of cotton stuffs, of French fabrication, exported during the years specified ;

2d. The quantities of yarns and tissues, with their values, of French fabrication, exported during the years specified ;

3d. A list of countries, and the value of cotton tissues, of French fabrication, exported to each during the years specified.

With regard to the commercial exchanges between France and the United States, it will be seen, by reference to the official statements in the *Tableau Général du Commerce* for 1856, that France took from us merchandise equal, in its real value, to \$50,945,400, of which she consumed to the amount of \$41,440,800 ; while we imported from her merchandise of the real value of \$95,508,000, of which \$60,189,600 were articles of French growth or fabrication. Among them were silk tissues and other stuffs, to the value of \$27,844,200 ; tissues, embroideries, and ribbons of wool, to the value of \$5,811,756 ; tissues, embroideries, and ribbons of cotton, to the value of \$874,200 ; wines, to the value of \$6,106,000 ; brandies and spirits, to the value of \$2,269,200 ; pottery, glass and crystal ware, to the value of \$1,029,324 ; dressed skins, to the value of \$2,213,400, &c, &c.

The above details will show that the condition of cotton manufacture in France is highly prosperous and remunerative, and there is no reason why the consumption of cotton wool should not go on increasing. The comparative dearth of fuel for manufacturing purposes is more than counterbalanced by the abundance and cheapness of labor and the monopoly of the home market, with a demand for cotton tissues and stuffs for clothing or luxury, which is daily augmenting. Nevertheless, the cotton manufacturing interest is at present in a nervous and excited state, owing to the exertions of the advocates of greater freedom of trade, and the abolition or radical modification of the prohibitory system.

While all the arguments of the friends of the existing policy are earnest, and often even impassioned, some of them are rather amusing. Rouen may be regarded as the very centre of the influence of the prohibitory policy, and it was there that I met with a small pamphlet, entitled *Le Libre Echange et le Droit d'Ainesse en Angleterre, par un Rouennais*, (free trade and the law of primogeniture in England, by a

resident of Rouen,) in which the writer attributes England's great manufacturing prosperity mainly to the cheapness of coal and the law of primogeniture; warning his countrymen of the political and social evils which will inevitably follow, should France open her ports, in imitation of her neighbor, to foreign cotton manufactures.

That a modification—the greater the better—of our commercial treaty with France, would be followed by an increased consumption of our cotton wool and other products, and would tend to the increased prosperity of both countries, does not admit of reasonable doubt.

At Rouen, particularly, the high price of American cotton was complained of by the mill owners, and, as a consequence of it, I was told that, on an estimated consumption of 140,000 bales, in the circle, for the year 1857, at least 15,000 would be of East Indian growth. Some of the spinners there had begun to spin East Indian cotton, unmixed with the longer and better stapled American, as has heretofore been the case in France and elsewhere in Europe; the proportions being one-third or one-fourth East Indian to two-thirds or three-fourths American. In the circle of Mulhouse, at least five-sixths of the raw cotton consumed, is of American growth.

A.

A table showing the quantity of cotton wool imported for consumption into France, together with the amount of duties paid on it, and the countries whence it came, for the two decennial terms, from 1827-1836 and 1837-1846, and also for the years 1854, 1855, and 1856.

[The original furnished by M. Fleury, director of external commerce in the ministry of agriculture, commerce, and public works of the French empire.]

To reduce the French kilogrammes into pounds, it has been assumed as equivalent to $2\frac{1}{2}$ of the latter; to reduce francs into dollars, 1 dollar is taken as equal to 5 francs and 33 centimes.

Whence imported.	1827-1836.	1837-1846.	1854.	1855.	1856.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
United States.....	59,785,000	108,708,600	148,376,600	158,085,200	173,137,800
Venezuela.....		255,200	121,000	239,800	165,000
Brazil.....	3,245,000	1,368,400	233,200	259,600	506,000
Peru.....	15,400	363,000	558,800	391,600	651,200
Hayti.....	213,400	180,400	125,400	123,200	123,200
Guadalupe.....	114,400	147,400	59,400	92,200	85,800
Algeria.....				28,600	48,400
English East Indies.....	499,400	770,000	158,400	525,800	693,000
Turkey.....	2,604,800	3,458,400	1,258,400	908,600	547,800
Egypt.....	5,827,800	3,555,200	5,101,800	5,977,400	6,778,200
INDIRECTLY IMPORTED.					
England.....	72,200	37,400	276,200	677,600	2,222,000
Belgium.....	50,600	48,400	869,000	129,800	101,200
Other countries.....	1,190,200	1,148,400	248,600	41,800	248,600
Total.....	73,625,200	120,040,800	157,386,800	167,479,200	183,488,200
Value in dollars, (official).....	10,969,164	17,971,878	23,659,200	25,128,600	27,829,320
Duties paid in dollars.....	1,345,324	2,178,060	2,881,928	3,145,260	3,712,286

B.

Tariff of duties levied on cotton wool imported into France. Kilogrammes converted into pounds, and francs and centimes into dollars and cents.

Cotton wool.	By French vessels, per 221 pounds.	By foreign vessels, or by land.
From French colonies.....	Free	Free
Turkey.....	\$2 79	\$4 65
India.....	1 86	-----
Elsewhere, out of Europe.....	3 72	-----
Entrepôts.....	4 65	-----
By land.....	-----	4 65
Unginned cotton from—		
French colonies.....	2	-----
Turkey.....	71	1 30
India.....	48	-----
Elsewhere, out of Europe.....	95	-----
Entrepôts.....	1 18	-----
By land.....	-----	1 30
Wadding.....	18 60	20 00

NOTE.—In converting francs and centimes into dollars and cents, in the above table, it was found necessary, in some instances, to add to or throw off small fractions, in order to make a full number.

C.

A statement of the various descriptions of cotton stuffs, of French fabrication, exported from France between the years 1844 and 1846, and 1854 and 1856, (also furnished by M. Fleury, director of foreign commerce, of the ministry of agriculture, commerce, and public works of the French empire,) expressed in pounds.

Years.	Muslins, percales, and calicoes.		Shawls and handk'chiefs.	Printaniers and nankinettes.	Gauze.	Other descriptions of fabrics.	Total fabrics.	Official value.*	Bounties paid †.
	Gray and bleached.	Colored and printed.							
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1844 -----	3,390,000	5,009,400	547,800	26,400	26,400	2,182,400	11,182,600	20,183,796	184,698
1845 -----	6,129,200	4,600,200	770,000	44,000	26,400	2,411,200	13,981,000	23,775,264	248,682
1846 -----	4,765,200	6,300,800	1,018,600	19,800	24,200	2,226,400	14,355,000	25,995,360	265,608
1854 -----	7,994,800	5,865,200	723,800	2,200	52,800	2,208,800	16,847,600	‡28,757,460	320,478
1855 -----	10,780,000	6,879,400	1,038,400	4,400	85,800	2,785,200	21,573,200	§36,456,000	411,990
1856 -----	9,011,200	6,923,400	772,200	6,600	96,800	3,359,400	20,169,600	||34,670,400	390,600

* The official value has been used since 1826.

† These bounties consist in the refunding by the government of the duties paid on the raw material.

‡ Real value, \$11,184,924.

§ Real value, \$13,782,600.

|| Real value, \$13,410,600.

D.

A table of the quantities and values of yarns or cotton tissues, of French manufacture, exported from France during the decennial periods of 1827—1836, and 1837—1846, and also for the years 1854, 1855; and 1856; the original furnished by M. Fleury, director of foreign commerce.

Decennial average.	Quantities.			Official values.		Real value.	
	Yarns	Tissues.	Total.	Yarns.	Tissues.	Total.	Yarns & tissues.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>	<i>Dollars.</i>
1827—1836 -----	237,600	4,695,200	5,332,800	110,112	10,114,680	10,224,792	-----
1837—1846 -----	*563,200	9,486,400	10,049,400	534,400	18,174,432	†18,528,576	-----
Years—1854 -----	504,000	16,847,600	17,353,600	341,682	28,754,460	29,097,282	11,178 600
1855 -----	484,000	21,573,200	22,057,200	307,732	36,456,000	36,773,732	13,905 546
1856 -----	569,800	20,169,600	20,739,400	386,136	34,670,400	35,057,536	14,866 980

* M. Fleury remarks that this average is so large on account of the extraordinary quantity of yarn exported during the last two years of the decade, it having been 1,742,400 pounds in 1845, and 2,125,200 pounds in 1846, of the respective values of 1,177,752 and 1,437,966 dollars.

† The real value of merchandise has only been adopted since the year 1847.

E.

A list of countries to which cotton tissues of French fabrication were exported, with the values of the same, from 1844 to 1846, and from 1854 to 1856, (furnished by M. Fleury director of foreign commerce in the ministry of agriculture, commerce, and public works of the French empire,) the values being official.

Countries.	1844.	1845.	1846.	1854.	1855.	1856.
Algeria	\$4,445,400	\$8,351,400	\$6,640,200	\$10,323,200	\$15,140,400	\$12,424,800
Other French colonies	3,124,800	3,162,000	4,473,400	3,868,800	4,036,200	3,999,000
Spain	4,891,800	3,757,200	4,780,200	2,808,600	3,831,600	3,608,400
United States	1,078,800	1,339,200	1,822,800	1,246,200	1,469,400	1,897,200
England	334,800	427,800	762,600	1,848,400	1,598,200	1,729,800
Sardinian States	1,102,000	1,176,400	1,784,200	1,120,600	1,176,400	1,692,600
Switzerland	985,800	1,153,200	1,395,000	1,060,200	1,450,800	1,618,200
Belgium	632,400	818,400	688,200	1,320,600	1,413,600	1,432,200
The Zollverein	520,800	613,800	725,400	911,400	930,000	1,116,000
Brazil	213,200	279,000	297,600	837,000	818,400	892,800
Turkey and Greece	93,000	148,800	130,200	279,000	390,600	669,600
Mexico	539,400	316,200	409,200	390,600	372,000	539,400
Naples and Sicily	74,400	204,600	353,400	239,000	427,800	446,400
Hayti	651,000	502,200	483,600	427,800	553,000	353,400
Tuscany and Papal States	409,200	141,800	279,000	167,400	204,600	297,600
Chili	55,800	111,600	148,800	204,600	372,000	297,600
Foreign West Indies	167,400	260,400	297,600	372,000	316,200	279,000
Buenos Ayres and Uruguay	18,600	37,200	18,600	372,000	372,000	279,000
Columbia*	37,200	74,400	241,800	148,800	241,800	213,200
Africa	111,600	55,800	55,800	148,800	204,600	167,400
Peru	18,600	55,800	55,800	180,600	446,400	130,200
Other countries	465,000	483,600	539,400	141,800	465,000	576,600
Total	20,181,000	23,770,800	26,002,800	128,755,600	136,456,000	134,670,400

* Including New Granada, Equador, and Venezuela.

† The real value was \$13,782,600.

‡ The real value was \$11,184,924.

§ The real value was \$13,410,600.

SWITZERLAND.

Entirely surrounded by other nations, with political institutions of an exceptional character on the continent of Europe, and forced to depend on the comity or caprice of her neighbors with maritime frontiers for her supplies of the raw material, Switzerland yet occupies so important a place in the cotton manufacture of the day, and combines so many advantages as to the abundance of capital and labor, as to rank next after Great Britain and the United States in the cheapness of her productions in that branch of industry.

With her increased cost of raw material and motive power, may be said to be compensated by low wages and greater artistic skill in the handling of the various fabrics which are sent out from her mills. In the year 1850 her entire population was 2,392,740, and in 1852 the cotton wool imported for consumption was 245,422 quintals, of 50 kilogrammes, or 110 pounds each, making 26,996,420 pounds, or 11,028 pounds to the inhabitant; while her export of cotton yarn, twist and fabrics of various kinds summed up to 150,758 quintals, or 15,088,590 pounds, being an average of 6,028 pounds to the inhabitant; leaving an average consumption of more than five pounds to the inhabitant.

Previous to the period of my visit to Switzerland, the only published history of the origin, progress and condition of the cotton manufacture of the country was that of Doctor, now Sir John Bowring, who visited Switzerland as the commissioner of the British Board of Trade, and whose "Report on the Commerce and Manufactures of Switzerland," addressed to that body, is to be found in volume 45 of the parliamentary papers, session of 1836.

In July last "The Trade Statistics of Switzerland," by M. Emile Weber, was published at Zurich, and being more than twenty years later in date than the report of Sir John Bowring, may well be supposed to contain more accurate information as to the actual condition of manufactures in the country. The courtesy of a correspondent of Berne enables me to refer, in a subsequent portion of this report, to M. Weber's account of the number of cotton mills in Switzerland.

Like all who visit the Swiss confederation, Sir John Bowring was most favorably impressed with those evidences of industry, comfort, and well-being which everywhere meet the eye of the stranger; and he pays, on more than one occasion, an eloquent tribute to the thrift, skill, intelligence, and hospitality of the people. Patient industry, regulated economy, immense capital, and a generous hospitality, would seem to be hereditary with these bold and independent mountaineers, whose hands are as cunning in the workshop as they are unflinching in the field of battle.

According to Mr. J. G. Zellwegger, of St. Gall, in a communication addressed to Sir John Bowring at the time of his visit, cotton manufactures were known at Zurich as early as 1419, and he cites a law of the canton of Lucerne, enacted in 1423, ordering that cotton should thenceforth be sold by weight. It may be that this was the origin of the custom, still so generally prevalent in continental Europe, of giving in

trade returns, or tables of imports and exports, the quantities of cotton and other tissues imported or exported into any country, by weight instead of measure, in ells, yards, &c. The markets for the goods fabricated in the fifteenth century were France, Italy, and Germany. The fabrication of cotton cambrics (bazins) was commenced in Appenzell, about the year 1746, the period, it will be remembered, of the establishment at Mulhouse, then a portion of the Swiss territory, of manufactures of *Indiennes*. This, said Mr. Zellwegger, was a fortunate thing for the canton, as the war which broke out in the East Indies, ten years afterwards, between England and France, brought manufactures of cottons and muslins into great demand, and several new establishments for bleaching and dyeing, with dressing machines and machinery for printing calicoes, were put into operation.

Cotton spinning, by hand, of course, also began about the same period, "the spinner being able to earn three florins (\$1 20) a week, and a weaver double that amount, while a measure of wheat of twenty-five pounds (twenty ounces each) did not cost more than forty kreutzers, or two-thirds of a florin." "It was about this period," continued Mr. Zellwegger, "that the firm of Gruzebach introduced the art of embroidering, which commenced by embroidering the wrists of men's shirts." A visit to St. Gall, last July, brought me the acquaintance of Mr. Zellwegger, of the very respectable house of Holderegger & Zellwegger, to whose obliging attentions and great intelligence I became greatly indebted, and was enabled to see many of those beautiful embroideries and figured muslins for which that city has become renowned, and which are the work of the peasantry in the neighboring mountains of Appenzell. The days of embroidered frills and powdered perukes had long since passed away, but of exquisite collars and sleeves to deck, though not conceal, the necks and arms of the belles of the present day, there was an almost endless variety.

The conclusion of the treaty of 1783, between England and France, brought with it a great reduction in the price, but not in the demand for Swiss manufactures, and a machine for making twist thread for embroideries was introduced, being the "first machine established in the canton." Attempts were also made to manufacture water twist and mule twist, as in England, and a native mechanic invented a machine to spin cotton, "which," observes Mr. Zellwegger, "was much inferior to the British machines."

The following paragraph will show how the Swiss manufacturers looked at opposition and its probable consequences at that period:

"Cotton manufactures were now established in France, and our workmen were bribed away in order to conduct them. This occasioned several prohibitory proclamations on the part of our magistrates, which were attended with as little effect as were the silly lamentations which, in every direction, predicted the utter ruin of our industry by the progress of manufactures in France. The French, on the other hand, raised a similar cry, should our goods be permitted to be placed in competition with the manufactures of that country. But all these fears and prognostications were without foundation; our manufactures continued to increase."

And so, might he have added, did those of France and every other

country engaged in the like industry. An increase which, vast as it has already proved, is, in all probability, destined to a further expansion, the limits of which few, at all acquainted with its history, will venture to prescribe.

The French government, carrying out that policy of prohibition which appears to have reigned in its councils since the days of Colbert, at this period prohibited the introduction of Swiss cotton goods, which was followed by a fall in their prices of from 40 to 50 per cent., a shock hard to bear, but not so disastrous as it might have otherwise proved, as it was followed by a system of smuggling on an extensive scale. In the year 1797, English machine-spun cottons first made their appearance in the Swiss markets; but the demand for them was checked by the general belief that they were inferior in strength and durability to yarns spun by hand. The spinners, meanwhile, took the occasion to improve themselves in weaving and embroidery, and their general prosperity continued until the French invasion in 1798, and the occupation of the country by the victorious troops of the new republic, subsequent to which an almost complete stagnation was visible.

For some years Switzerland continued to constitute a part of the French republic, or the empire which succeeded it, and shared its fortunes in commerce and manufactures; the latter of which, particularly after the treaty of Amiens, suffered no little from the increased facilities for cheap productions afforded in England by new inventions in various branches of the art. The spinners of St. Gall, however, showed no antipathy to these new systems of labor, but availed themselves readily of whatever advantages they possessed; and in 1800, the year of its introduction, as has already been said, through Ghent into France, the English spinning machine was introduced into St. Gall, followed, in 1801, by power-looms, machines for dressing cloth, and a chemical process for bleaching.

The wars of the French empire, and the changes brought about by the events which accompanied them, together with the commercial policy proclaimed subsequent to the overthrow of that empire by most of the leading continental powers, had a marked and, in many respects, a very ruinous effect on the fortunes of the Swiss cotton manufacturers; and, deprived of their accustomed markets, they began to turn their eyes towards the United States, and even remoter markets; the result has been an ample reward for their enterprise and skill.

At the time of Sir John Bowring's visit, in 1835, the canton of Zurich had not taken the position of superiority in Swiss cotton manufacture which it now unquestionably holds, as it possesses 503,369 of the 1,112,303 spindles, and 2,595 of the 7,779 looms to be found in the country. As is said above, cotton manufactures had their origin there early in the fifteenth century, and exhibited a gradual increase until the beginning of the present century, when, in 1802, an Englishman introduced, though with defective machinery, the spinning of water and mule twist; but it was not until five years afterwards that machinery sufficiently perfect to insure prosperity to that branch was introduced.

The consumption of cotton wool in 1835 was about 3,360,000 pounds, which was spun into yarns varying in numbers from 20 to 40, although a mill at Winterthur sent out No. 120. The number of persons then

employed in that canton, in spinning, was about 5,000; the average wages being, for men $3\frac{1}{2}$, the women 2, and the children $1\frac{1}{2}$ florins per week. [The florin was equal to 60 kreutzers, or 40 cents of our currency. It is not now used, having given place to francs and centimes, of the same value as those of France and Belgium.]

At the same period there were about 12,000 weavers and 4,000 other persons engaged in cotton manufactures; 800,000 pieces of cloth were manufactured yearly, with nineteen printing establishments, employing 1,000 persons, and producing yearly about 100,000 pieces of calico. The canton had then 225,000 inhabitants, and in 1850 they had increased to 250,698.

The canton of Aargau, or Argovia, as it is also called, occupied, in 1835, the next rank to Zurich in cotton spinning and weaving; at this day it has the same number of mills for spinning as St. Gall, though the number of spindles exceeds that of the latter canton. Aargau produces, principally, the lowest numbers of yarns and the coarser styles of tissues. In 1835 the weaving was altogether done by hand, and in the dwellings of the weavers. It then imported raw cotton from the English, French, and Dutch markets, and also *via* Trieste, and received from England cotton twist, chiefly of the higher numbers, cloths for printing, and various other tissues of that material. According to the report so often quoted above, the wages were from 7 to 10 batzen ($10\frac{1}{2}d.$ to $1s. 3d.$) per day, for spinners and those employed in the printing establishments. Youths, between 14 and 18 years, got from 3 to 5 batzen per day.

According to Mr. Weber's "Trade Statistics of Switzerland, Zurich, 1857," the number of cotton spinning mills in Switzerland is now 132, and the number of weaving mills 48, distributed and furnished as follows:

Cantons.	Mills.	Spindles.	Weaving Mills.	Looms.
Argovia.....	13	162,400	10	1,320
Basle.....	1	8,000	.....	.....
Berne.....	2	14,600	1	150
St. Gall.....	13	115,894	4	480
Glarus.....	11	139,140	10	1,890
Schaffhausen.....	2	10,300	1	150
Schwiz.....	6	59,500	2	440
Thurgau.....	4	23,100	4	454
Zurich.....	77	503,693	14	2,595
Zug.....	3	76,000	2	300
Total	132	1,112,303	48	7,779

At St. Gall I was furnished, through the courtesy of M. Bergermann, the leading dealer in yarns and twist, with a table, carefully prepared by his deceased partner, in the year 1853, of all the spinning and weaving mills then known in Switzerland, with the places of location, number of spindles or looms, and names of proprietors.

At that period the number of spinners was 138, with 907,799 spindles, and of weaving mills 31, with 3,727 looms, of which only six were distinct from spinneries. M. Bergermann estimated the increase in spindles, for the four years elapsed since the table was compiled, at 10 per cent.; and the statement furnished by M. Weber shows that he was within the mark. The apparent diminution in the number of

mills, during the same period, can scarcely be real, as the business has unquestionably been prosperous and yielding fair profits on the capital invested.

The two most extensive cotton spinneries in Switzerland at the present day are Messrs. Henri Kunz and Henri Schmid, both of whom reside in the canton of Zurich. I had the pleasure and advantage of an interview with the first named, at his residence, in the town of Uster, some fifteen miles from the city of Zurich, and he gave me some interesting details as to the manufacture.

The annual consumption in the different mills belonging to Mr. Kunz is between 6,000 and 7,000 bales of raw cotton; having, as he said, diminished somewhat under the great rise in prices. Of late, owing to an increasing demand for the finer numbers of cotton yarns, he has been using American and Egyptian cotton, in about equal quantities, and finds that the latter, though costing more, yields a greater profit for those descriptions of yarns. Of sea-islands he consumed but a very small quantity, and that only for the very finest numbers of yarns. But few mills (only three or four) in the country use it. Egyptian cotton of good middling quality or above, delivered at Uster, costs from 130 to 150 francs (\$24 18 to \$27 90) the 100 Swiss pounds; while American, of similar grades, costs from 10 francs (\$1 86) to 15 francs (\$2 79) less for the same weight. The Swiss pound is 10 per cent. heavier than the English. Egyptian bales weigh from 350 to 500 Swiss pounds. On American cotton wool the waste is, he says, about 12 to 15 per cent.; on Egyptian, which is not so clean, it is fully one per cent. more. Surat cotton is only used when American and Egyptian reach very high prices, while Brazilian is scarcely known.

The duties levied on the raw material are but insignificant, and are less than the road and bridge tolls used to be when each canton had its own custom-houses; and consumption is not affected by them in the least. Mr. Kunz purchases the bulk of his raw material at Liverpool, as he gives limited orders, and wishes to keep them as far as practicable under his control, which he could not do in the remoter American markets. When he does buy at American ports, his agents are supplied with credits on London, Paris, or Basle, as may be most advisable at the period of purchase. The freight charges vary, so far as ship carriage is concerned, considerably, according to the facility of procuring vessels.

When cotton is purchased at Liverpool it is transported in vessels to Mannheim, and there transferred to the railroads; the charges per 100 kilogrammes (220 pounds) to Zurich being from 6 francs 40 centimes to 6 francs 75 centimes.

The freight from Rotterdam, *via* Mannheim, is 4 f. 5 cent. to 4 f. 80 cent. the 100 kilos. From Havre the same weight will cost, by rail, 6 f. 40 cent. to 6 f. 50 cent. From Marseilles it will cost, if by rail, 6 f. 15 cent. to 6 f. 35 cent.; and if partially by water, 35 to 60 centimes less. In all these cases the duty of 30 centimes per 100 kilos. is not included.

M. Henri Schmid very courteously replied to the various questions asked of him. His annual consumption of raw material is about 6,000

quintals (110 pounds,) or 660,000 pounds, of which only one-sixth is of Egyptian growth, which is imported by way of Trieste. The remainder is of American, Georgia, and Louisiana, and comes by way of Havre or Marseilles. He estimates the cost of transportation to the factory as being equal to 30 per cent. on the purchase price; there being but little difference between the various ports in this respect, with the exception of Havre, through which the charges do not exceed 20 per cent.

Mr. Schmid has several spinning or weaving mills, giving employment to some 800 hands, whose average wages are 1 franc 40 centimes *per diem*, and the yearly value of their products bring 1,000,000 francs, or \$186,000. Of the yarns spun, the far greater portion is woven on the spot. Some go to eastern Switzerland, and a small quantity to the German markets. The numbers spun range from 20 to 200 of the English system. Of tissues, the chief production is of calicoes (yarns, 40 to 50) and jaconet muslins. The annual production is 1,600,000 ells, of the value of 500,000 francs, or \$93,000, for all of which there is a good home market. When he buys in the United States his agents have credits on London or Paris, at sixty days' sight, subject to prevailing rates of exchange on the last named city, which generally range from 5 francs 15 centimes to 5 francs 30 centimes the dollar. Purchases at Alexandria are paid for in a similar manner, though the rates of exchange vary in that case between 5 francs and 5 francs 15 centimes the dollar. Mr Schmid estimates the average waste on American cotton, according to grade, at from 10 to 20 per cent. It is, as a general rule, less than that in other varieties of the same classification, though it may be sometimes more. The waste of American is in greater demand than that of Egyptian or Indian cotton. He agrees with all other spinners from whom I have had any information, that the duty on the raw material is too small to affect consumption.

At Zurich a leading merchant and cotton buyer informed me that at least nine-tenths of the consumption of cotton wool in Switzerland was of the growth of the United States; there being but a small proportion of Egyptian, and still less of Brazilian or East Indian, called for. The Swiss manufacturers, with whom capital is generally abundant, have availed themselves of all the latest inventions and improvements in machinery, both for spinning and weaving; and their establishments are, for the most part, models as to neatness, order and skill.

The little town of Watwyl, built high up among the spurs of the Alps, is the scene of an active and prosperous industry. I had the pleasure of making the acquaintance of the two leading firms of Abram Raschle and J. Rod Raschle & Co., to each of whom I am indebted for courteous reception and readily furnished information as to the condition of the cotton manufacture at Watwyl.

Mr. Abram Raschel carries on the three branches of spinning, weaving and dyeing. Three-fourths of the raw cotton consumed in his mills is of the growth of the United States, and of ordinary grades; the other fourth is of Egyptian growth. His markets are the United States, (which is the chief,) the Levant, the East Indies—the places to which his fabrics go being Singapore, Manila, Calcutta, and Bombay, and Italy, which takes about one-third of his manufactures.

The waste varies in spinning from 6 per cent. to 10 per cent. The numbers of yarns spun range from 40 to 60. Unbleached, these yarns are worth 3 francs, or 56 cents, for 40's; and 4 francs, or 74 cents, per pound for 60's. His looms are all worked by hand, and the number of hands employed by him ranges from 600 to 800. In 1856 the value of the products of his mills was 1,000,000 francs, or \$186,000, the whole of which went to foreign markets.

The establishment of Messrs. J. Rod Raschle & Co. are more extensive than those of Mr. Abram Raschle. They use but very little Egyptian or Surat cottons; the great bulk being of the growth of the United States, and of the variety which they term Louisiana.

The tissues principally produced at Watwyl are gingham, checks, madras handkerchiefs, printanieres, and striped goods. The printanieres for Turkey and the Levant are of fine styles, as are many of the gingham. For the East Indies the styles are cheap and heavy. Gaily colored shawls and handkerchiefs, with Turkey red grounds and light figures, are also manufactured to a considerable extent. The calicoes and other stuffs demanded by the home market are for the most part woven in the houses of the different families, scarcely one of which is without a loom and weaver. These two firms have their agents at New York, and other cities, and their invoices are made up on orders transmitted through them.

The small though very wealthy city of St. Gall, the highest town of any importance in Europe, above the level of the sea, is the centre of the manufactures of fine muslins and embroideries. To the firm of Holderegger & Zellwegger, who carry on a large business in those articles, I was indebted for the kindest reception and the most civil attentions during my stay in the town. There is but little manufacturing carried on in St. Gall itself, the business being mostly in the hands of small and enterprising capitalists, who enter into contracts with the merchants for furnishing within a given delay such quantities of embroideries or figured muslins as they may desire, and then have the work executed by the inhabitants of the district or canton in which they live, and which may be many miles away; or in some instances, where these middlemen are well known for probity and punctuality, they are entrusted by the merchants with a given quantity of thread or bobinet, laces or tulles, to be converted into muslins or embroideries within a certain delay, to be paid for at an agreed rate, after deducting the value of the materials so furnished.

Two leagues from St. Gall, and still higher above the sea, is the beautiful and very cleanly little town of Hérisan, in the canton of Appenzell, which is also remarkable for its figured muslins and various articles of embroidered work, as well as for other tissues of cotton of greater or less fineness, according to the demand. Through the kindness of Mr. J. J. Neff, I had here the opportunity of witnessing the operation of weaving the finer and more costly styles of figured muslins. The looms used were, as I was informed, the invention of Mr. Neff. They are placed in well lighted cellars, in order to preserve the moisture and pliability of the threads used, which is the general mode of the entire district. The yarns used for these styles of muslins are from numbers 60 to 150 and 180. The weavers get from 8 francs to 10 francs the piece of 8 ells.

At St. Gall and Hérisan may be seen some of the finest and costliest figured or other muslins and embroideries for dress and curtains, which enjoy a superiority in all the markets of the civilized world, only disputed to a limited extent by the productions of Tarare, for which the French claim a superiority in the taste of the designs. The chief markets for the finest articles of these description are England and the United States. The inferior goods go to the Levant, the East Indies, South America, &c. The bobinet for these embroideries is imported from England, and comes from the famous looms of Nottingham.

At St. Gall are also found several bleaching and dressing mills. That belonging to Mr. Messmer is extensive and well worth a visit; the courteous proprietor taking every pains to point out and explain its various details. Here muslins, tulles, guipures, gingham, printanieres, shawls and handkerchiefs are either bleached, dyed, printed, washed, sized or folded, pressed, marked and packed, ready for the various markets to which they are destined. Many of the processes are highly interesting, particularly those for the dyeing of muslins and embroideries by steam, in order to preserve the pliability of the threads.

The wages paid in these establishments range from eighty centimes to one franc fifty centimes per day for women, and two francs to three francs per day for men.

The working day is fourteen hours, and in the winter it is not uncommon for the hands to work from 5 o'clock a. m. to midnight, with customary intermissions for meals. In this portion, at least, of Switzerland, children begin to work in the factories at the age of ten, and, in some instances, even six years. It is obligatory on the employer to permit them to attend school, at fixed hours, daily, until they reach twelve years, and once or twice a week afterwards, until they are fourteen.

Their wages are very small, not exceeding fifteen centimes—something under five cents—per day, when they first enter the mill, and for some time afterwards.

The stuffs printed at St. Gall are of both Swiss and English fabrication, no little of "gray cloth" being imported from the latter to be converted into colored goods. For the markets of Constantinople and the Levant, great quantities of gaily colored articles, such as shawls and handkerchiefs, mostly on Turkey red grounds, are preferred. For Wallachia and the other markets on the lower Danube, graver tints are preferred; which is also the case with the goods sent to Spain and Italy.

All these tissues are of the lower qualities of cotton, the yarns used being Nos. 40 to 80, for warp, and 60 to 100, for woof; they are also, for the most part, rather flimsy in texture. For robes, the muslins are of much finer quality, those of English fabrication being composed of yarns ranging from Nos. 80 to 140.

All descriptions of embroidery, in St. Gall and Appenzell, are done by hand, with the exception of some narrow insertions, for which machinery is employed.

For purposes of revenue from importations, Switzerland is divided into six arrondissements, or districts. The first consists of the cantons of Berne, Soleure, Basle (town and county), and Aargau; the second,

of the cantons of Zurich, Schaffhausen and Thurgovia; the third, of the cantons of St. Gall and the Grisons; the fourth, of the cantons of Tessino; the fifth of the cantons of Vaud and Neuchatel; and the sixth, of the cantons of Valais and Geneva.

The importations of cotton-wool into the country by way of the north, the northwest, and northeast, may be assumed to be almost exclusively of American growth. Those by the east and south are, on the contrary, almost exclusively of Egyptian growth; while those of the southwest are also Egyptian, with perhaps a small portion of American, shipped from New Orleans to Marseilles.

The table herewith presented, which is official, will show the annual import of cotton-wool, yarns, and tissues, and duties paid thereon, together with the exports of the same, for the five years from 1852 to 1856, inclusive. It will be seen that the amount of cotton-wool imported in 1852 was 27,396,420 pounds, and in 1856, 28,324,860 pounds. While the cotton-wool exported in 1852 was 1,464,650 pounds, and in 1856, 1,773,200 pounds, with an annual average of 1,549,430 pounds.

The quantity of yarns and threads imported during the same period averaged 364,540 pounds; that exported, 1,671,560 pounds. The quantity of cotton tissues imported averaged 3,529,020 pounds, while the exports of the same averaged 15,788,960 pounds.

As for the future prospects of cotton manufacture in Switzerland, it may be said that though it is an inland country, without seaports or coal beds, and therefore obliged to pay an increased price for the raw material, as well as for the necessary fuel to convert it into yarns or tissues, there is, nevertheless, to be found abundance of capital and cheap labor, whereby those disadvantages are overcome to a considerable degree. The general diffusion of skill in handwork, aided by the system of popular education, the frugal habits of the people, and the winters of eight month's duration, compelling the inhabitants to remain within doors, all contribute to make up for the disadvantages under which it otherwise labors; the influence of new inventions in machinery, and methods of saving fuel, must also be felt there as they have been elsewhere; while the more liberal modern systems which dispense raw materials and manufactures from it, *in transitu*, from the payment of duties to the countries through which they pass, place Switzerland more on a footing with maritime countries than might otherwise be the case. A still further increase in her importation and manufacture of cotton-wool seems therefore altogether probable.

I cannot conclude this portion of my report without expressing my obligations for kind assistance or valuable information from our excellent minister at Berne, the Hon. Theodore S. Fay; to Mr. A. H. Goundie, the consul at Zurich, and to Messrs. Frauschini and Frey, members of the federal council of the Swiss confederation. M. Frauschini, in particular, manifested the warmest desire to afford me all possible information. He was a gentleman of accomplished manners and varied information, and the proceedings of the general assembly on the occasion of his sudden death showed the high esteem in which he was held by his countrymen.

A statement of cotton-wool and cotton fabrics imported into, or exported from, Switzerland, from the year 1852 to 1856, inclusive: weights and measures reduced to American standard.

34

CONSUMPTION OF COTTON IN EUROPE.

Descriptions.	Years.	Duty per quintal of 110 lbs. or 50 French kilogrammes	IMPORTS.							Years.	Duty per quintal of 110 lbs.	EXPORTS.		
			N. W. district: Basle.	N. dist.: Schaffhausen & Romanshorn.	E. dist.: Rorschach, Chur, and the St. Gallen.	S. dist.: Chiasso and Magadins.	W. and S. W. dist.: Valais, Geneva, Vaud, & Neuchâtel.	Total for year.	Yearly average.			Total for year.	Yearly average.	
			Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.			Pounds.	Pounds.	
Cotton wool.....	1852	30 centimes..	19,065,310	3,465,000	3,630,660	3,190	832,260	27,396,420	25,324,860	1852	30 centimes..	1,464,650	1,549,430	
	1853	....do	18,441,830	2,705,340	1,638,230	1,650	893,860	23,680,910		1853	....do	1,676,950		
	1854	....do	15,910,950	1,613,480	2,830,680	4,400	715,110	21,080,620		1854	....do	1,133,550		
	1855	....do	19,890,750	1,673,540	4,112,680	76,126	532,730	26,283,820		1855	....do	1,697,410		
	1856	....do	21,678,360	1,665,180	4,725,828	11,110	494,450	28,580,310		1856	....do	1,773,260		
Unbleached yarn and thread.	1852	37 cents.....	92,510	14,080	78,760	1,760	18,480	205,590	364,540	1852	30 centimes..	1,494,790	1,671,560	
	1853	....do	29,590	13,750	15,510	550	7,590	66,990		1853	....do	2,228,820		
	1854	....do	49,390	11,110	35,260	990	10,890	108,240		1854	....do	1,435,060		
	1855	....do	76,120	23,650	11,000	2,530	60,720	174,020		1855	....do	1,396,560		
	1856	....do	107,030	1,870	7,810	990	10,560	128,260		1856	....do	1,802,460		
Bleached and dyed yarn and thread.	1852	56 cents.....	113,630	14,300	33,880	4,400	55,440	221,650	3,529,020	1852	30 centimes..	Inclu'd in the above.	15,088,590	
	1853	....do	102,960	11,220	33,110	3,630	60,720	211,640		1853	....do			15,114,330
	1854	....do	97,680	7,700	34,210	4,290	55,660	199,540		1854	....do			14,024,120
	1855	....do	107,360	11,550	29,590	6,160	93,610	248,270		1855	....do			17,213,360
	1856	....do	137,280	10,450	38,500	8,580	63,470	258,280		1856	....do			18,154,070
Unbleached cotton tissues.	1852	37 cents.....	489,390	335,500	86,680	88,220	62,810	1,062,600	3,529,020	1852	30 centimes..	Inclu'd in the above.	15,788,960	
	1853	....do	455,950	283,800	149,930	76,120	54,560	1,020,360		1853	....do			15,114,330
	1854	....do	666,930	186,670	105,930	73,260	61,380	1,095,170		1854	....do			14,024,120
	1855	....do	942,700	711,160	155,100	110,440	45,210	1,974,610		1855	....do			17,213,360
	1856	....do	2,144,340	678,150	292,270	85,140	150,150	3,350,050		1856	....do			18,154,070
Bleached, dyed, or printed cotton tissues.	1852	\$1 49 cents..	666,490	33,660	51,480	633,600	469,040	1,854,270	146,091,770	1852	30 centimes..	Inclu'd in the above.	19,009,650	
	1853	....do	653,950	45,980	56,870	504,970	510,510	1,776,288		1853	....do			10,208,770
	1854	....do	633,600	47,630	56,320	384,230	475,660	1,597,640		1854	....do			146,049,770
	1855	....do	566,390	56,210	51,700	719,510	455,410	1,849,210		1855	....do			29,218,420
	1856	....do	736,670	69,740	59,950	602,030	597,630	2,066,020		1856	....do			
										Total exports.....	95,047,920	19,009,650		
										Home consumption.	51,043,850	10,208,770		
											146,049,770	29,218,420		

NOTE.—The values of the imports and exports are not given, and much delay and difficulty would probably attend the effort to obtain them.

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THE HANSE TOWNS.

Although none of it is consumed in their territories, the two free cities of Bremen and Hamburg receive annually a large and rapidly increasing amount of cotton-wool, which is distributed thence into the States composing the German Custom's Union, Switzerland, Austria, Russia and Sweden. In this, therefore, as well as in other commercial aspects, the present condition and future prospects of their trade becomes a question of high interest to American statesmen.

It was my good fortune to meet in both those cities, in the persons of the officers and members of their respective chambers of commerce, gentlemen who honor their calling as merchants, and are distinguished for the extent and variety of their information concerning the commerce of the world. Having a more extensive trade than Hamburg with our country, the city of Bremen, by the greater certainty of remunerative round voyages, offers perhaps greater facilities, as an importing point, to the consumers of the interior than the first named. Her merchants, too, have long appreciated the value of a direct trade with us, and have labored with persevering zeal and liberality to obtain their full share of its profits and advantages.

The cheapness of transportation into her port of the raw material, enables Bremen to compete successfully in the supply of the spinning mills at Vienna, even with Trieste, which is much nearer, and which is now connected with the capital by an uninterrupted line of railroad. The principal cause of this is the great difficulty of obtaining return freights for the ships which take cargoes of cotton to Trieste, while at Bremen, either cargo or full complements of passengers to the United States are, in general, readily found.

The liberal policy of the city with regard to port charges, and the facilities which it offers in the way of docks, and the abundance of labor for the cheap discharge and taking in of cargoes, have also had their effect upon the growth of its trade.

The following communication from Mr. E. Klugkist, the president of the Bremen Chamber of Commerce, with its accompanying tables, exhibit clearly the movement of the trade of that port, in cotton-wool, yarn, tissues and other fabrics, for the period of five years, beginning with 1852 and ending with 1856.

The importation of cotton-wool has swollen from 8,635,196 Bremen pounds, 100 of which are equal to 109.80 of our own, and a value of 1,220,891 louis d'or thalers, equal to 78 $\frac{1}{2}$ cents in the first named year, to 41,557,005 Bremen pounds, and the value of 6,898,559 louis d'or thalers in 1856.

Your particuear attention is respectfully called to the answer of Mr. Klugkist to the 10th interrogatory ; as it embodies the views which his high commercial position and experience have enabled him to form, as to the causes which may operate, either to increase or diminish the direct trade between Bremen and the United States.

BREMEN, *September 2, 1857.*

SIR: I have the pleasure of handing to you, enclosed, the reply to the questions put by your favor of 18th July, which it is hoped will answer your purposes.

You will also meet with some suggestions pointing to obstacles whose bearing, in the opinion of the chamber of commerce, is of vital influence on the commercial intercourse between the German ports and those of the United States, which is capable of much greater extension, if allowed to develop itself on its own merits.

Any further information is at your service on this subject, and adding the assurance of high esteem, I have the honor to be—

Your obedient servant,

E. KLUGKIST.

JOHN CLAIBORNE, Esq.

Answers to questions put by Mr. Claiborne.

Question 1. The quantity of cotton-wool annually imported into Bremen, the countries of its growth, and the ports whence it is so shipped to this port, is answered by annexed statement, p. 1.

Question 2. The freight and charges paid on such cotton-wool, and its value on arrival?

Answer. The value is stated, also, on page 1.

It is composed of the invoice amount at the ports of shipment, with shipping, charges, and commission, adding freight and insurance.

The freight from the United States is subject to great fluctuations, from one fourth to two cents per hundred. It is, generally, fully as low, and lower to Bremen than to Liverpool, on account of the very low port charges here. From Bombay, the freight is about £4 per 50 cubic feet.

Question 3. How much, if any, of the said cotton-wool is consumed in Bremen, and how much distributed thence into other territory, specifying the different countries, the amount sent to each, and the duties and charges of every nature with which it is burdened in the transit?

Answer. Consumption in Bremen is quite trifling. The countries which draw this supply from Bremen are specified on page 2 of statement. There is levied a transit duty of one-half cent per 100 lbs. in Bremen; the other charges are only those which are combined with every business transaction—say weighing, transporting from ship to railroad, and the small commission for doing this business.

Question 4. Are the duties or charges sufficiently high to lessen the consumption of cotton-wool, or cotton fabrics, in any one of the States or Territories so supplied? if yea, specify such States or Territories, and the government or corporation by which the duties or charges are laid and collected.

Answer. The duty on cotton fabrics is high both in the Zollverein

and Austria, to which countries the bulk of the cotton imported in Bremen is exported, but on yarn low; and as inland manufactures are sufficiently advanced, this duty does probably not lessen consumption. There is a transit duty on cotton passing the Zollverein, if to Austria, of $3\frac{1}{2}$ per cent. per 100 pounds; other parts, 5 per cent. per 100 pounds—which proves very injurious, as by sending cotton to Switzerland by way of Antwerp or France, to Austria by way of Trieste, it can be avoided, thus giving the merchants in Liverpool and London an advantage over those in Bremen and Hamburg, strengthening the supremacy which Liverpool has already in the cotton trade. It would materially assist the German markets, in their efforts to make themselves independent, if this unnatural transit duty would be done away with.

Question 5. The quantity of cotton yarn annually imported, the country or countries whence it is brought, its value per pound, according to numbers, and the place or places where sent from Bremen?

Answer. Is answered by statement, page 3. The numbers of the yarns cannot be given. Exports of the same are found at page four.

Question 6. The amount and value of cotton or mixed cotton tissues or fabrics annually imported, the countries whence it comes, the duties and charges paid on it, and its value in this market?

Answer. Is answered by statement, page 5. There is no duty here whatever on the sale, and they can be imported by land from any port. There is not, therefore, a method of ascertaining the different kinds, as no entry is made.

Question 7. The amount and value of cotton or mixed cotton tissues or fabrics annually exported, and the countries to which it goes?

Answer. Is answered by statement, page 6. From the causes alluded to, question 6, this information cannot be more explicit. If exported again, a transit duty of half a cent per 100 pounds is also levied, as on raw cotton.

Question 8. The course of exchange which attends the purchase of cotton-wool or fabrics for this market?

Answer. Cotton purchases are generally made in the United States by drawing, against the amount, bills on Bremen. The exchange varies, and has during the last years been from 70 to 80 cents per 1 R.

Question 9. What articles of production or manufacture does Bremen receive from the various countries which she supplies with cotton wool, in exchange for such supplies?

Answer. Cotton consumers pay with produce or manufactures which are sent here for sale. There is a great inland trade going on, too manifold to be specified.

Question 10. In case of the entire supply of American cotton-wool which is taken by Bremen, or the countries which here obtain their supplies, coming direct from America, what articles of domestic production or manufacture could be exchanged against such cotton-wool?

Answer. So far, the United States has been the country which supplied the cotton, but owing to its increasing value, efforts are making to get supplies from the East Indies, and this year, about 20 per cent. imports will be Surat cotton, which although selling $33\frac{1}{2}$

per cent. lower, pays a profit. It is not as good, but manufacturers are compelled to resort to it, by the high rates of North American cotton.

Our imports from the United States are paid for by some kinds of German produce and a good deal of manufactures, among which form a prominent part:

Cloth, (woolen,) cotton goods, hosiery, silks, segars, toys, glass, looking-glass plates, willow baskets, musical instruments, pianos, zeni wool, manufactures of porcelain, negro pipes, bottles and demi-johns.

Nearly all these articles pay a pretty high duty, which curtails their consumption in the United States, and diminishes the consuming power of the lower classes, who produce these articles with us.

A reduction of the duty on such articles would materially increase the export trade to the United States, and the consumption of cotton, tobacco, rice, and other articles produced by the United States, in Germany.

It must be remarked that the value is computed here in rix dollars, having a value of 78 to 80 cents each. 112 pounds American weight are equal to 102 pounds in Bremen.

HAMBURG.

With a much larger population and a proportionately greater capital upon which to base her commerce than her sister city, Hamburg does not seem to have appreciated to the same extent as Bremen the value and importance of a direct trade with the United States. Her ships, like those of Great Britain and our own country, are found in every quarter of the globe, as her merchants of the present generation do not appear to have lost in any degree the spirit of enterprise and commercial adventure which has characterized their ancestors through many generations. That she should continue to receive indirectly the greater part of her imports of so important an article of consumption as cotton, is difficult of explanation with persons uninformed as to the nature of her financial combinations.

The accompanying official statements, in which the weights are reduced to our standards, furnished through the courtesy of Dr. Soetbeer, the secretary of the chamber of commerce, will show that in the year 1855, the last for which any commercial statement had been published at the period of my visit, the importation of cotton from the United States was 6,114,320 pounds, while that *via* Great Britain was 31,381,960 pounds, or more than five times as large. The fact that the far greater portion of this importation by way of Great Britain was of American growth, will enable you to see how vast must be the addition to the price of the bulk of the raw material to the German spinners and mill owners, by the existing system of trade, as they receive their supplies burdened, at the very least, with two sets of charges for freight and commissions to brokers, agents, and bankers,

instead of but a single one. A leading banker and merchant of Hamburg, in explanation of this state of things, said to me that it had grown up and continued to exist mainly on account of the absence in the United States markets of an extended system of credits, such as could be obtained in England; and he also regarded the plan of short payments, enforced in our markets, as being a very considerable obstacle to additional consumption in continental Europe, which, he argued, would increase far more rapidly could longer credits than three months (that being about the available limit under present circumstances) be obtained by the purchaser, as could be done in the English markets, and but for which circumstance the amount of trade in cotton, so far as Hamburg was concerned, would soon change into a more direct channel.

The value of direct trade with us is, however, much more appreciated by the Hamburgers at this time than has hitherto been the case, and with the example and immense commercial progress of Bremen, in that respect, before them, as an illustration of the great advantages likely to flow from it, if properly fostered, they are turning their eyes beyond the marts of London and Liverpool to those of New York and New Orleans, anxious to secure, if practicable, for themselves the only profits on that portion of our products which is consumed in the interior States of Germany; and at the same time to endeavor, by the establishment of a steady, cheap, and well supplied market, to command, to a greater degree than at present, the supply of our raw materials to northern Europe.

The communication of Dr. Soetbeer will show that there are no duties levied on cotton imported into Hamburg; the only contribution of that nature being the toll exacted by the Hanoverian government upon the cargoes of all vessels passing the town of Stade; a tax of which the merchants and shipmasters of the city complain with great show of reason, alleging that it is in clear violation of the treaty of Vienna, and so far also as American ships are concerned, of the terms of our existing treaty with that power. This course of policy on the part of Hanover is the more obnoxious, because the entire charge of providing for the safe and convenient navigation of the Elbe, and the keeping up of the lights, buoys, &c., falls upon Hamburg alone; and from the fact also that the Hanoverian government levies no similar toll on the ships and property of its own subjects.

It will be seen that the raw cotton imported into Hamburg is distributed thence by water or railroad communication in Saxony, Bohemia, Austria, and of late years, since the railroads have afforded sufficient facilities for cheap transportation, into Bavaria and Switzerland. It is through Hamburg, as I was informed, that Saxony, which may be considered as taking the lead among the German States in the cotton manufacture, obtains the bulk of her supply of the raw material, and it is through that port and Bremen that the various fabrics and tissues into which the article is converted in the interior find their way into the most remote markets of the world.

It is believed that the cost of interior transportation will still further decline with the progress and development of the German system of railroads, and improvements in river navigation on the Elbe

and the Weser, and that there is every prospect of a steady and growing demand for raw material for manufacturing purposes, from the interior, and particularly from quarters where, owing to the absence, until within a comparatively recent period, of the means of rapid and easy communication with the sea ports, manufacturing industry was not so inviting to continental capital, nor capable of that progress and development which is thought to be now before it.

As Dr. Soetbeer does not give the values of the cotton-wool, and yarn imported into and exported from Hamburg, the following statement, which also includes cotton manufactured goods, is compiled from the official statement of the trade of the city for the year 1855, published in 1856; that for the latter year not having been printed at the period of my visit.

The imports, exports, and value of the same articles for the year 1854 is also given.

1855.—Value of cotton-wool imported.....	\$4,447,145
“ Value of yarn and twist imported.....	10,319,393
“ Value of manufactured goods imported.....	8,957,257
Total.....	<u>23,723,795</u>
1855.—Value of cotton-wool exported.....	\$4,858,088
“ Value of yarn and twist exported.....	11,627,162
“ Value of manufactured goods exported.....	8,682,594
Total.....	<u>25,157,844</u>
1854.—Value of cotton-wool imported.....	\$5,351,105
“ Value of yarn and twist imported.....	8,474,624
“ Value of manufactured goods imported.....	8,828,161
Total.....	<u>22,653,890</u>
1854.—Value of cotton-wool exported.....	\$3,724,553
“ Value of yarn and twist exported.....	8,059,065
“ Value of manufactured goods exported.....	7,450,310
Total.....	<u>19,233,928</u>

HAMBURG, *August 24, 1857.*

SIR: In reply to your esteemed favor of the 24th of July, containing several questions about our cotton trade, I respectfully beg leave to give the following explanations:

1. I refer to the annexed tables.

The principal ports whence it was shipped are New York and New Orleans ; some cargoes came from Mobile and Charleston.

2. The rate of freight from New Orleans and Mobile fluctuated between $\frac{3}{4}$ and $2\frac{1}{4}$ cents per lb. ; $1\frac{1}{4}$ and $1\frac{1}{2}$ cents per lb. is about an average. From New York the usual rate of freight is between $\frac{1}{2}$ and $\frac{3}{4}$ cents per lb. The charges attending an invoice to Hamburg are light, and by the taking off of all duties, less than to any other continental ports. The charges here are: Stade duty, (levied by the Hanoverian government.)

U. B. 24 g. gr.=1 mark current, $\frac{3}{4}$ groschen per 100 lbs.

Delivery, &c., 8 B. per bale.

Brokerage, $\frac{5}{6}$ per cent.

Commission, 2 per cent.

3. The whole of our importation goes to the interior ; chiefly to Saxony, Bohemia, Austria, and latterly to Bavaria and Switzerland. A good deal of the finer qualities, fully good middling, to fully fair, is going to Russia, and some to Sweden and Poland. All classifications are quite ready of sale, but middling to middling fair are the most sought for.

4. All Hamburg duties on cotton-wool have been removed, only the Stade duty ; a passage toll laid by Hanover remains.

5. Of cotton yarns and twist about 35,000 bales touch our port in transit from England to the interior per annum ; none is sold or brought here, as we have no market for the article. There are no duties besides the Stade duties, (11 B. banco per bale.)

6. Our importation and exportation of the fabrics or tissues of cotton, &c., reach a great extent, but we cannot give the particular statistics.

7. Against shipment of cotton to our markets, reimbursement is taken from the south of the United States, on New York, by sight drafts, at from 2 per cent. discount to 2 per cent. premium, but usually at 1 per cent. discount ; and from New York drafts are issued at 60 days sight, usually at the exchange of $36\frac{1}{4}$ to $36\frac{3}{4}$ cents per 1 B. banco.

8. Fabrics, tissues, &c., are the chief articles returned from the interior for supplies of cotton ; and our exportation of such goods, &c., reaches so high an amount that the most of the remittances made from the interior to other cotton markets consist in drafts on Hamburg against the excess of goods sent hither for shipment.

9. All kinds of goods, fabrics, &c., are shipped to the United States from our port, overreaching by far the amount of our importation of cotton.

With high respect, I remain sir, your most obedient servant,

AD. SOETBEER, *Dr.*

Mr. JOHN CLAIBORNE,

Special Agent, &c.

Statement of the imports and value of cotton-wool into Bremen, in the years named, furnished by Mr. Klugkist, and referred to by him as page 1 in his answers. Weights and values reduced to the standard of the United States.

Imports of cotton-wool.	1852.		1853.		1854.		1855.		1856.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Oldenburg.....									105,482	\$9,254 70
Hamburg.....							134,844	\$4,247 77		
Egypt.....					210,816	\$25,200 00	338,133	39,434 06		
Great Britain.....	269,249	\$23,803 76	232,128	\$19,881 22	417,713	34,298 77	1,007,193	86,095 01	1,790,107	164,344 16
New York.....	1,763,713	176,309 45	3,062,240	358,714 12	2,894,164	319,993 53	5,672,383	690,977 70	3,416,288	424,654 65
Philadelphia.....					174,252	23,081 32				
Baltimore.....			13,771	1,745 88						
Charleston, S. C.....	1,442,982	149,721 86	2,284,644	277,014 15	699,005	81,690 62	1,371,261	138,058 20	7,682,237	915,160 05
Savannah.....	227,280	26,760 03	289,510	35,549 32			1,230,485	122,756 28	395,397	48,636 78
Mobile.....					1,213,243	146,534 06	687,776	90,575 10	3,984,789	443,661 75
New Orleans.....	5,056,020	518,230 12	5,618,019	609,023 7	15,673,451	1,802,701 68	13,682,492	1,560,812 40	24,881,569	3,061,817 32
Galveston.....	541,232	58,868 27	1,055,175	119,202 30	1,563,601	170,515 80	1,558,621	173,299 61	2,396,930	279,412 87
Hayti.....	23,598	1,890 00	8,388	687 48	24,650	2,466 45	124,977	11,492 77	133,863	12,507 07
Porto Rico.....	5,420	567 00			90,920	12,488 17	15,256	2,090 81	15,262	1,968 75
Venezuela.....	19,225	1,811 25	54,370	5,770 01	31,073	3,622 50	76,371	8,228 58	48,123	5,770 80
Brazil.....	58,468	6,466 95			33,580	3,390 97	92,817	12,261 37	47,492	6,480 33
Bombay.....									636,431	58,366 35
Other countries.....	13,472	922 95	39,005	3,268 12	21,371	1,613 58	25,574	2,330 21	5,615	597 60
Total.....	9,470,459	961,351 64	12,657,250	1,430,855 97	23,047,839	2,627,597 45	26,018,183	2,942,659 87	45,539,585	5,432,615 18

Statement of cotton-wool exported from Bremen during the years specified, referred to by Mr. Klugkist in his answer to the 3d interrogatory as page 2.

Cotton-wool ex- ported to—	1852.		1853.		1854.		1855.		1856.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Hanover.....	228, 939	\$26, 063 88	141, 153	\$15, 953 17	264, 559	\$28, 312 98	1, 077, 989	\$121, 854 60	2, 230, 645	\$252, 860 73
Oldenburg.....	178, 778	16, 865 88	117, 378	12, 815 77	433, 626	46, 518 41	189, 764	17, 880 18	449, 108	50, 025 93
Prussia.....	1, 255, 989	141, 202 68	1, 529, 375	180, 933 65	3, 763, 389	434, 811 82	3, 412, 411	403, 369 31	6, 607, 584	836, 676 88
Saxony.....	5, 541, 761	614, 966 62	5, 441, 231	659, 148 52	6, 900, 789	811, 900 68	9, 625, 191	1, 146, 314 88	11, 299, 901	1, 453, 242 26
Brunswick.....	82, 057	8, 229 37	24, 011	2, 375 10	8, 767	934 76	28, 975	3, 156 30	33, 690	3, 370 50
Bavaria.....	182, 979	20, 707 82	1, 902, 943	227, 138 62	4, 222, 713	501, 363 45	4, 455, 273	527, 843 13	9, 690, 919	1, 242, 771 86
Baden.....	32, 619	3, 346 08	347, 284	42, 001 21	141, 121	16, 254 78	72, 166	8, 938 12	200, 789	26, 574 18
Wurtemberg.....	132, 217	13, 263 62	85, 515	11, 369 92	148, 337	17, 171 43	543, 325	63, 826 87	740, 560	95, 711 17
Hamburg.....	-----	-----	105, 718	14, 026 95	35, 353	3, 675 26	577, 649	74, 560 50	332, 069	43, 192 80
Russia and Poland.....	37, 396	4, 560 36	289, 919	38, 687 51	875, 438	114, 623 77	986, 474	124, 168 27	5, 082, 307	668, 370 15
Sweden.....	-----	-----	-----	-----	-----	-----	46, 848	5, 599 90	15, 756	2, 050 65
Norway.....	-----	-----	-----	-----	-----	-----	-----	-----	194, 113	25, 046 43
Holland.....	-----	-----	42, 523	5, 242 38	-----	-----	8, 014	826 08	11, 004	1, 452 15
France.....	-----	-----	-----	-----	-----	-----	49, 410	6, 142 50	-----	-----
Switzerland.....	468, 258	52, 319 13	45, 374	5, 142 37	88, 031	10, 417 83	93, 597	10, 292 62	428, 923	56, 964 60
Austria.....	1, 643, 606	179, 784 67	1, 436, 316	178, 218 33	2, 871, 141	337, 623 30	5, 527, 142	662, 441 85	9, 521, 015	1, 207, 152 41
Great Britain.....	-----	-----	54, 883	3, 301 20	-----	-----	-----	-----	101, 115	12, 207 82
Other countries.....	32, 436	3, 713 06	8, 819	1, 091 47	12, 427	1, 397 81	15, 831	1, 868 73	41, 085	4, 949 43
Total.....	9, 817, 035	1, 085, 013 17	11, 572, 442	1, 397, 446 17	19, 765, 691	2, 325, 006 28	26, 710, 059	3, 179, 083 84	46, 980, 583	5, 981, 619 95

Statement of cotton yarns imported into Bremen during the years specified, referred to by Mr. Klugkist, in answer to the 5th interrogatory, as page 3. Values and weights reduced to the United States standard.

Cotton yarns imported from—	1852.		1853.		1854.		1855.		1856.	
	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.	Pounds.	Value.
Hanover -----	12,245	\$1,938 03	8,454	\$1,941 97	7,751	\$2,571 18	14,061	\$5,565 26	11,194	\$1,783 68
Oldenburg -----	215,541	28,341 33	141,859	20,349 00	573,303	82,237 83	732,078	116,679 93	863,734	137,662 87
Prussia -----	26,958	14,912 88	45,599	17,247 82	21,394	8,662 50	21,930	10,802 92	30,770	13,235 51
Saxony -----	4,057	1,646 90	2,804	1,370 25	3,398	1,242 67	4,172	1,734 07	2,816	1,137 15
Brunswick -----	1,229	415 80	1,899	613 46	2,865	1,027 68	1,886	759 93	2,584	1,020 60
Hamburg -----	29,955	5,273 88	21,082	4,076 10	11,880	2,623 95	20,473	3,597 30	8,724	1,641 15
Great Britain -----	457,614	75,417 30	445,289	79,901 32	844,948	137,547 11	1,924,446	344,616 30	3,542,091	667,819 68
Other countries --	139	89 77	1,320	162 22	490	153 56	612	241 76	552	219 80
Total -----	747,738	128,035 89	668,306	125,662 14	1,466,029	236,066 48	2,719,658	483,997 47	4,462,465	824,520 44

Statement of cotton yarns exported from Bremen during the years specified, referred to by Mr. Klugkist, in answer to 5th interrogatory, as page 4 ; values and weights reduced to the United States standard.

Cotton yarns export- ed to—	1852.		1853.		1854.		1855.		1856.	
	Pounds.	Value.	Pounds.	Value.	Pounds	Value.	Pounds.	Value.	Pounds.	Value.
Hanover-----	379,941	\$59,057 77	342,694	\$57,963 15	482,455	\$80,302 95	551,215	\$98,473 72	829,716	\$162,208 46
Oldenburg-----	15,092	4,660 42	17,837	5,462 10	21,554	5,456 58	17,905	7,318 23	12,632	3,913 87
Prussia-----	80,077	13,290 63	102,589	17,605 35	723,760	108,739 57	1,566,817	267,142 83	2,230,074	396,264 48
Saxony-----	1,555	259 08	-----	-----	8,440	1,242 67	58,622	10 418 62	1,655,131	198,630 33
Brunswick-----	76,577	12,772 46	38,376	6,860 70	139,337	23,580 11	113,174	20,292 30	92,763	18,277 87
Duchy of Saxe-----	13,822	2,294 02	30,131	5,403 03	3,708	628 42	50,312	9,021 60	86,570	16,097 28
Bavaria-----	5,633	740 25	-----	-----	929	157 50	21,833	3,914 66	26,662	5,019 52
Hesse Darmstadt---	14,011	2,348 08	8,290	1,486 01	-----	-----	1,251	224 51	-----	-----
Kurhesse-----	23,465	3,915 37	29,235	5,242 38	28,450	4,817 92	36,239	6,497 66	34,738	6,277 21
Austria-----	-----	-----	-----	-----	1,054	189 00	240,594	43,139 25	47,566	8,479 80
United States-----	12,769	7,469 43	18,289	8,101 80	10,808	4,308 41	9,181	3,839 85	19,523	8,037 22
Other countries----	4,368	752 06	17,189	5,925 15	16,581	2,810 58	4,893	1,045 80	6,775	1,541 13
Total-----	627,310	107,549 57	604,630	114,049 67	1,437,076	232,233 71	2,672,036	471,329 03	4,442,150	824,747 17

Cotton manufactured goods imported into Bremen during the years specified, referred to by Mr. Klugkist, in his answers to questions 6 and 7, as page 5 ; value in dollars.

46

Whence.	1852		1853.		1854.		1855.		1856	
	Packages.	Value.	Packages.	Value.	Packages.	Value.	Packages.	Value.	Packages.	Value.
Hanover.....	1, 928	\$99, 549	2, 493	\$152, 342	1, 665	\$74, 177	1, 587	\$65, 005	1, 747	\$77, 387
Oldenburg.....	1, 641	76, 020	1, 310	75, 795	1, 245	107, 039	1, 611	129, 156	1, 458	124, 145
Prussia.....	1, 189	180, 653	1, 494	291, 493	1, 594	210, 226	1, 302	114, 474	1, 669	195, 498
Saxony.....	13, 555	1, 679, 337	15, 292	2, 368, 913	13, 535	1, 912, 658	13, 169	1, 653, 189	15, 647	2, 244, 189
Brunswick.....	94	7, 903	77	5, 110	64	4, 149	60	3, 929	52	4, 075
Duchy of Saxe.....	11	669	32	2, 330	69	4, 782	23	2, 372	70	8, 559
Bavaria.....	71	7, 587	493	61, 274	604	73, 074	506	65, 608	611	99, 242
Wurtemberg.....	-----	-----	2	79	56	9, 927	62	10 434	25	3, 887
Frankfort on the Maine.....	-----	-----	-----	-----	6	551	8	1, 017	83	13, 928
Hesse Darmstadt....	2	183	1	232	12	2, 126	4	543	19	2, 955
Kurhesse.....	9	773	10	1, 410	16	1, 610	26	2, 154	47	2, 992
Hamburg.....	111	10, 540	573	87, 389	401	46, 585	321	49, 610	219	19, 192
Holland.....	79	6, 121	27	1, 704	-----	-----	2	21	-----	-----
Great Britain.....	60	16, 004	205	50, 326	233	47, 441	351	76, 891	113	21, 819
Other countries.....	6	-----	31	-----	28	2, 670	31	2, 511	31	4, 504
Total.....	18, 754	2, 085, 319	22, 040	3, 098, 379	19, 528	2, 497, 015	19, 063	2, 176, 914	21, 801	2, 821, 372

CONSUMPTION OF COTTON IN EUROPE.

Cotton manufactured goods exported from Bremen during the years specified, referred to by Mr. Klugkist in his answers to questions 6 and 7, as page 6 ; value in dollars.

Whither.	1852.		1853.		1854.		1855.		1856.	
	Packages.	Value.	Packages.	Value.	Packages.	Value.	Packages.	Value.	Packages.	Value.
Hanover	2,816	\$172,586	2,992	\$173,813	1,776	\$79,173	2,075	\$101,319	2,077	\$97,614
Oldenburg	355	18,564	340	23,503	428	27,746	623	40,528	602	33,149
Prussia	2	224	5	105	413	62,940	421	75,376	454	81,509
Hamburg	362	27,050	393	31,443	231	14,514	113	7,733	53	2,544
Austria							155	39,745	1	39
United States	13,386	1,736,099	16,506	2,507,707	14,332	2,070,030	13,059	1,752,895	16,416	2,413,600
Mexico	216	30,758	292	51,758	179	20,922	154	14,441	157	17,534
Cuba	16	1,771	37	4,179	95	9,306	33	5,937	37	6,059
Hayti	185	20,948	119	13,820	355	44,921	152	18,950	118	14,175
Venezuela	88	10,799	68	7,803	105	12,703	234	28,678	192	21,698
Singapore									81	18,291
Java	64	10,518	149	29,665			12	3,434	80	13,926
Sandwich Islands			27	4,051	150	31,902	56	7,881	41	4,706
Bremerhaven	159	8,181	197	14,129	298	17,594	220	13,943	185	9,631
Other countries	159	14,803	86	11,412	74	7,132	117	16,429	207	27,136
Total	17,808	2,054,301	21,211	2,873,388	18,436	2,208,883	17,434	2,127,339	20,701	2,761,611

Statement of cotton-wool imported into Hamburg in the years named ; weights reduced to those of the United States.

Whence.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
United States.....	7, 692, 900	5, 505, 422	3, 764, 641	5, 131, 675	13, 712, 212	12, 903, 682	16, 086, 653	6, 530, 093
Brazil	98, 704	193, 340	123, 343	177, 063	97, 508	118, 259	192, 741	320, 667
Venezuela.....	96, 824	119, 135	61, 774	134, 557	507, 824	440, 336	271, 996	216, 889
Peru and Chili.....	61, 355	-----	-----	4, 773	-----	119, 680	106, 864	-----
Great Britain	9, 498, 471	15, 510, 860	21, 027, 232	23, 702, 166	21, 015, 314	28, 206, 841	35, 744, 134	33, 915, 933
Netherlands	46, 959	563, 710	29, 957	61, 036	-----	-----	271, 165	891, 054
Bremen.....	51, 210	18, 262	23, 143	217, 829	13, 125	162, 837	6, 310	602, 191
France	54, 136	2, 018	66, 130	326, 541	309, 890	354, 359	42, 378	112, 449
Other countries.....	175, 686	3, 232, 248	1, 755, 740	1, 932, 076	3, 478, 337	3, 139, 485	3, 880, 923	4, 404, 175
Total.....	17, 776, 245	25, 144, 995	26, 851, 960	31, 687, 716	39, 134, 210	45, 445, 479	56, 603, 155	47, 083, 451

Cotton-wool exported from Hamburg in the years named.

Whither.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Germany, &c.....	18, 500, 024	24, 365, 041	25, 614, 185	29, 217, 041	35, 985, 031	37, 784, 686	48, 814, 078	43, 541, 345
North of Europe	2, 269, 994	2, 280, 596	1, 709, 451	2, 722, 011	3, 701, 626	3, 300, 387	6, 271, 716	4, 006, 730
Total.....	20, 770, 018	26, 645, 637	27, 323, 636	31, 939, 052	39, 686, 651	41, 085, 073	55, 085, 794	47, 608, 075

Cotton yarn and twist imported into Hamburg in the years named.

Whence.	1848.	1849.	1850.	1851.	1852.	1853.	1854.	1855.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Great Britain.....	32,783,908	33,383,140	43,821,898	39,814,599	39,226,123	36,337,350	42,050,737	46,254,379
Other countries.....	585,958	2,246,032	2,115,665	3,293,156	5,983,865	5,943,537	5,914,050	8,499,528
Total.....	33,369,866	40,629,172	45,937,563	43,107,755	45,209,988	42,280,887	47,964,787	54,753,907

NOTE.—The above are the latest official returns up to July, 1857. Du Fay & Co.'s Trade Report, (Manchester,) considered excellent authority, of October 31, 1857, furnishes a statement of the quantities, in yards and pounds, of cotton manufacture, and yarn and twist, exported to the Hanse Towns for the first three quarters of the years 1856 and 1857, as follows:

Cotton manufactured up to September 30, 1856.....	yards..	47,120,029
Do.....do.....1857.....	do...	39,833,417
Cotton yarn and twist up to September 30, 1856.....	pounds..	36,565,505
Do.....do.....1857.....	do...	37,824,700

A statement of the quantity and value of cotton-wool exported from Hamburg in 1855, with the countries to which it was sent; values and weights according to the United States standard.

	Pounds.	Dollars.
Sweden	85,490	8,410
Prussia	34,808	2,713
Bremen and the Weser.....	139,950	3,815
Great Britain.....	82,652	8,372
France	21,311	2,548
Altona, &c.....	1,394,150	129,535
Altona and Kiel railroad	101,532	11,872
Lubeck.....	2,569,078	304,234
Berlin and Hamburg railroad.....	25,545,790	2,347,457
By wagons and boats.....	26,554	2,409
Harburg, and beyond	12,506,447	1,028,010
The upper Elbe.....	10,679,306	996,419
Total.....	53,147,068	4,845,884

ADDENDA.

BREMEN LEGATION,
Washington, February 13, 1858.

SIR: Knowing the interest taken by the department in collecting information that may stimulate home production, by pointing out the natural channels and avenues into which foreign demand must eventually lead American commerce, I take pleasure in transmitting to you a memoir on the consumption of cotton in the German Zollverein, which, founded on official and most reliable private sources, will serve to prove how rapidly the consumption of cotton is increasing in Germany, and the justness of the assumption that this increase will continue in the immediate future.

I avail myself of this opportunity to offer you the assurance of my very high consideration.

R. SCHLEIDEN.

Hon. JACOB THOMPSON,
Secretary of the Interior of the United States, Washington, D. C.

The consumption of cotton of the German Zollverein.

According to the treasury reports on the commerce and navigation of the United States, the exports of American cotton to Bremen and Hamburg during the last four financial years were as follows :

Year.	To Bremen.			To Hamburg.		
	Bales.	Pounds.	Value.	Bales.	Pounds.	Value.
1853-'54 -----		23, 959, 656	\$2, 232, 222		13, 760, 266	\$1, 304, 138
1854-'55 -----	51, 648	22, 661, 173	2, 020, 438	18, 672	8, 148, 818	761, 572
1855-'56 -----	103, 054	46, 456, 809	4, 238, 497	34, 192	15, 609, 844	1, 469, 753
1856-'57 -----	71, 165	34, 378, 685	4, 356, 418	22, 720	10, 524, 075	1, 311, 935

Although the quantity exported during the last year was smaller than that shipped during the previous one, yet the increased value of the article makes up fully for the decreased quantity, the same having doubled during both of the last two years. In fact, Bremen and Hamburg import more American cotton than any other country, except Great Britain, France, and Spain. In order to appreciate how far this state of things rests on a sound basis, it seems fit to inquire into the wants of those countries which nature itself has taught to look to the above ports as the proper markets for supplying themselves.

While there are about $3\frac{1}{4}$ millions of spindles in France, and about 21 millions in Great Britain, there were working at the beginning of the present year in the German Zollverein :

	Cotton man- ufactories.	With spin- dles.	Consuming bales of American cotton.	Bales of East India cotton.*
In Bavaria -----	16	316, 700	29, 800	5, 800
In the kingdom of Saxony -----	133	554, 646	34, 200	34, 000
In Prussia -----	20	289, 000	22, 500	9, 000
In Baden -----	10	185, 600	18, 600	6, 200
In Wurtemberg -----	12	119, 000	11, 950	3, 700
In Hanover -----	1	48, 800	3, 000	3, 000
In Oldenburg -----	4	20, 400	1, 200	3, 200
Total -----	196	1, 534, 146	121, 050	64, 900

Grand total, 185,950 bales.

* We use here the expression "East India" cotton as a general term for all species spun in the Zollverein besides American cotton.

The manufacture will be increased during the present year by :

	Cotton man- ufactories.	Spindles.	To consume bales of American.	Bales of East India cotton.
In Bavaria	2	232,000	20,250	4,400
In Saxony	1	50,000	3,500	2,000
In Prussia	6	135,000	10,500	4,000
In Baden	1	25,000	1,500	-----
In Wurtemberg	-----	15,000	1,650	-----
In Hanover	1	7,000	-----	1,000
In Oldenburg	1	20,000	1,000	1,000
Total	12	484,000	38,300	12,400

Grand total, 50,700 bales.

There will be, therefore, in working order next year :

	Cotton man- ufactories.	Spindles.	To consume bales of American.	Bales of East India cotton.	Total.
In Bavaria	18	548,700	50,050	10,200	60,250 lbs.
In Saxony	134	604,646	36,700	36,000	73,700 "
In Prussia	26	424,000	33,000	13,000	46,000 "
In Baden	11	210,600	20,100	6,200	26,300 "
In Wurtemberg	12	134,000	13,600	3,700	17,300 "
In Hanover	2	55,800	3,000	4,000	7,000 "
In Oldenburg	5	40,400	2,200	4,200	6,400 "
Total in Zollverein..	208	2,018,146	158,650	77,300	235,950 "

In 1856 the number of spindles actually in operation within the German Zollverein was only 1,200,000, and the amount of cotton consumed 160,000 bales.

The above statement, which is brought down to the present day, shows the former number increased within two years to 1,534,000, and the cotton consumed to 186,000 bales, while these numbers will be further increased, during the present year, to: manufactories 208, spindles 2,018,146, and bales needed for consumption 235,950.

Furthermore, the Austrian empire, according to the last reliable statistics, of the year 1851, numbered 208 cotton manufactories, with a total of 1,482,138 spindles, and of a consuming capacity of 130,000 bales.

Although it was impossible to gather newer dates from that quarter, the increase since may be safely estimated at 15 per cent. Of those Austrian manufactories are situated :

	Manufactories.	Spindles.	Bales.
In Tyrol	20	195,000	17,000
In Bohemia	79	460,000	35,000
Total	99	655,000	52,000

The statistics of these two countries are of particular interest on account of the greater quantity of the raw materials, needed by them, being imported by Bremen and Hamburg, and a considerable part of their manufactured articles being consumed in the Zollverein. But the manufactories of the other parts of Austria, although they do not sell much to the countries of the Zollverein, have lately commenced to import part of the raw materials needed by those northern ports, as the cheapest and speediest way of procuring them.

Great as the increase of the cotton manufacture has been throughout Germany, the fact of the continuing importation of English cotton goods, amounting, for the Zollverein alone, to 550,000 cwts. a year—the manufacture of which will require at least 175,000 bales—gives additional evidence of this branch of industry being capable of still more successful development; and, consequently, there is still a great field open for improving the direct cotton trade between the United States and Germany, by the way of Bremen and Hamburg. This is rendered less doubtful, as these seaports are already capable, in consequence of their extensive shipping, and of a general reduction in the rates of railroad freight throughout Germany, to supply to an important amount the wants of countries beyond the Zollverein. Among these countries Austria and Switzerland are prominent, where there are respectively about 1,500,000 and 1,250,000 of spindles in operation, and where Bremen and Hamburg compete successfully with the ports of France, Belgium and Holland; these, on the other hand, supplying part of those States of Germany which, according to their situation, could be better provided by the German ports.

Comparing, therefore, the amount imported by foreign ports into the Zollverein, and that imported by German ports into foreign countries, Bremen and Hamburg are no doubt destined to import, in the course of time, at least, such a quantity of cotton as is required by the Zollverein, viz: 236,000 bales. For the present, however, the direct imports of Bremen and Hamburg fall about 90,000 bales short of this amount; these, during the year ending the 31st of December last, having been only as follows:

At Bremen.....	86,079 bales of American cotton.
	25,605 bales of East India cotton.
	533 bales of South American cotton.
	395 bales of West India cotton.

Total.....	112,612 bales.
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At Hamburg.....	25,599 bales of American cotton.
	15,582 bales of East India cotton.
	1,033 bales of South American cotton.
	6,373 bales of West India cotton.

Total.....	48,587 bales.
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At Bremen.....	112,612 bales.
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Grand total.....	161,199 bales.
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RUSSIA.

The empire of Russia has kept a nearly equal pace with the other continental states in the increase of consumption and manufacture of cotton ; and her most enlightened statesmen seem fully to appreciate the importance of this great branch of industry, though some of them do not conceal their dissatisfaction at the inroads it has made upon the manufacture of flax, which is a raw material of domestic growth, while every pound of cotton is exotic.

A very interesting account of the history of the use and progress of the domestic manufacture of cotton, and the fluctuations to which it has been subject, either from financial or political causes, is to be found in the second volume of Prince Téoborski's "*Commentaries on the productive forces of Russia*," a work highly prized by his countrymen, and which is regarded as a standard authority on all subjects of which it treats.

Beginning by stating what he conceives to be the leading points of advantage or disadvantage to Russia, from cotton manufactures and their continued increase, the author proceeds to a clear and succinct narrative of their establishment, and the progress which they had made up to the year 1852, from which the following statements are compiled :

The first spinning mill was established in 1823 ; and two years later, the only one of any importance in the country was that owned by the government at Alexandrovsky, on the Neva, a few miles above St. Petersburg.

During the succeeding ten years but little increase in the number of mills was evident ; and, in 1835, the importation of cotton-wool reached only 200,000 poods, of 36 English pounds each ; or 7,200,000 pounds ; the manufacture of fabrics reaching 800,000 poods, or 28,800,000 pounds, showing how much they still were dependent on other countries for supplies of yarns. At the time of the first spinning mill being put into operation, the Russian tariff absolutely prohibited the introduction of cotton prints, and, on plain cottons, duties ranging from 60 to more than 100 per cent. were imposed. The consequence was, that cotton manufacture "monopolized speculation, to the detriment of many other branches of industry ;" and its progress was rapid, as is shown by the table of the triennial averages of importation of the raw material, and of twist, beginning with 1824 :

Years.	Pounds of raw cotton.	Pounds of twist.
1824-'26.....	2, 673, 648	2, 022, 606
1827-'29.....	3, 534, 480	15, 860, 952
1830-'32.....	4, 175, 856	19, 211, 540
1833-'35.....	6, 162, 804	19, 678, 364
1836-'38.....	10, 180, 764	21, 561, 668
1839-'41.....	12, 807, 864	19, 515, 500
1842-'44.....	18, 882, 396	21, 318, 948
1845-'47.....	28, 085, 364	18, 156, 096
1848-'50.....	47, 845, 116	10, 134, 720
1851.....	52, 585, 632	5, 685, 516
1852.....	62, 940, 456	4, 058, 388

"Thus," says Prince Tégaborski, "we see that the importation of raw cotton has followed a continuously ascending movement, exhibiting in its latest results an augmentation in the proportion of 1 to 24; whilst that of twist, after nearly tripling, in the course of the first fifteen years, has fallen gradually to a third of the cypher of 1824-'26; and to less than a fifth of its culminating cypher of 1836-'38."

Taking the period of sixteen years 1834 to 1850, the increase in Russian cotton manufactures, as compared with that of France, was nearly as 3 to 2; compared to that of Austria, it was, as 10 to 44; the duty on the raw material being raised in Russia from 5 to 6½ roubles per pood, while in Austria it has been lowered from 30, 60, and 81 florins, according to quality, to a uniform rate of 10 florins the center. With the states of the Zollverein, the comparison was in favor of the latter, being in the proportion of 6 to 5. From the commencement, cotton yarn had been protected by a duty of 5 roubles (\$3 75) the pood; but still the spinneries made little perceptible progress until 1842.

Among the other struggles undergone by the spinners was that of the impossibility of procuring, up to that date, proper machinery, the exportation of that of English manufacture being prohibited, and they had consequently to rely on the "defective" machinery of France or Belgium. At the period of the great commercial crisis of 1841-'42, the spinners at Moscow solicited and obtained from the government, as a temporary measure, an increase in the duty on cotton yarns, and it was accordingly raised to 6½ rubles (\$4 88) the pood, at which point it remained at the time the author was writing. As will be seen hereafter, this rate has been greatly lowered by the tariff of 1857. This duty of 6½ roubles the pood was deemed equal in yarns of medium fineness, 20-40, to "the enormous rate of 60 per cent. and upwards, *ad valorem*," and gave a great impulse to the spinning mills; so that while in 1848-'50, they furnished 82 per cent. of the whole quantity of yarn used in the weaving industry of the country, they, in 1852, furnished all of it but about 7 per cent. But this apparently prosperous state of affairs, was nevertheless, in the view of Prince Tégaborski, accompanied with risks and inconveniences; for, as he observed, the heavy duty on yarn, while it had rendered the manufacturers independent, had also made fabrics dear, and "a host of speculators, working on borrowed capital, at a high rate of interest," had started a number of ill regulated establishments, which, without the bounty of a highly protective tariff, could not exist.

In quality, the mass of the yarns produced in Russia are of the lower numbers, 48, 50, being the highest; most spinners turn out No. 30 to 40 mule, and 20 to 30 water twist, those qualities forming the bulk of consumption; "and it is desirable that they should remain upon this good path," for, "if they were to attempt competition in higher numbers with their brethren of England, who have brought their yarn to a pitch of fineness which we may almost term fabulous, it would, in our opinion, be a question rather of *amour propre* than of real utility." There was no evidence, at the period of my visit to the country, and interviews with some of the mill owners and importers, of a disregard of the advice thus given; Russia will, for a long time

yet to come, adhere to the production of the ordinary numbers, and the fabrics woven from them, they being best suited to her domestic demand, and that of such countries in Asia as she supplies with either article.

With regard to the number of spindles in Russia at the time he wrote, the author says, that it had been common to assume one for each pood of raw cotton; but this he regarded as too low, citing the work of M. Sainoiloff, on the Spinneries of the Government of Moscow, of which there were, in 1843, twenty-two, reckoning 155,404 spindles, and yearly producing 155,949 poods of yarn, none of which was finer than No. 38, 42; which gave an average of $40\frac{1}{100}$ pounds per spindle; in making up his own estimate, he assumes the proper average to be 45 pounds per spindle, and making his calculation upon the importation of 1,329,031 poods of raw cotton, and the production of 1,129,000 poods of yarn, during the triennial period of 1848-'50, he arrives at the number 1,004,000, which, together with 50,000 then in operation in the kingdom of Poland, and those in the spinning mills of the grand duchy of Finland, he concludes that the total number may be set down at 1,100,000 spindles; the justness of this conclusion he strengthens by comparisons with the estimated number of spindles and the production of yarn in England, France, and several other countries, and assigns to Russia the fifth place in spinning industry among those nations where it "had attained to a certain degree of importance." The order in which he named those nations was: England, France, the United States, Austria, Russia, the Zollverein States, Switzerland, Belgium, Italy, and Spain.

On this subject of cotton spinning, later information, as to the number of mills and spindles, will be found in the communication, hereafter alluded to, of M. Boutowen.

In the department of weaving, Prince Tegaborski observes, that the 1,371,196 poods (51,363,056 pounds) of cotton fabrics manufactured in Russia, according to the average importation of raw cotton and twist, during the triennium of 1848-'50, represent at the rate of 40 roubles (\$30) per pood, a value of 54,847,840 roubles, (\$41,136,880.) In Poland he places the manufacture, according to information which he regards as more reliable than official returns, at 500,000 poods, all of which, being very common calicoes and stuffs, he estimates as worth only 25 roubles (\$18 75) the pood, or \$937,500, making a total of 56,000,000 roubles, or \$42,000,000, from which, making the following deductions,

- | | |
|---|--------------|
| 1. About 1,400,000 poods (50,400,000 lbs.) of raw cotton, including importations into Poland, at R. 6 (\$4 50) per pood..... | R. 8,400,000 |
| 2. About 300,000 poods (10,800,000 lbs.) of yarn, including importations into Poland, in round numbers | R. 5,000,000 |
| 3. For at least 1,000,000 poods (36,000,000 lbs.) of cotton prints, the value of the tinctorial and chemical substances used, at R. 5 (\$3 75) per pood | R. 5,000,000 |

4. About 4 per cent. on the total value of the manufacture, to represent interest of capital employed in the acquisition of machinery imported, in round numbers.....	R. 2,000,000
Total	R. 20,400,000

He arrives at the conclusion that the addition made annually by this branch of industry to the national wealth is equal to R. 35,600,000 or \$26,700,000. In a note it is stated that in 1852 the importations of raw cotton and twist gave 1,599,000 poods, (59,564,000 lbs.,) representing a value of R. 63,960,000 or \$47,960,000.

As to the number of persons employed in cotton manufacture, only approximative estimates could be made.

The 22 spinning mills in the government of Moscow, in 1843, with their 155,404 spindles, employed 8,348 hands, or 19 spindles to each hand; assuming 20 spindles as a fair average to each person employed, and with an assumed total of spindles of 1,100,000, the result would be 55,000 persons in that branch.

At that period there were in the same government 382 other establishments for weaving, bleaching, dyeing, &c., employing altogether about 42,500 operatives, and producing fabrics to the value of 12,500,000 roubles, or \$9,475,000, being an average of 294 roubles (\$211 50) per operative. With this proportion there would be required for a production of 56,000,000 roubles, (\$42,050,000,) 190,000 operatives; but, as in that calculation, the weavers working outside the mills in the villages, &c., were not included, 200,000 was assumed as the true number of employés in all departments.

Regarding the annual consumption, *per capita*, of cotton manufactures, it is said: "In Russia, the average quantity manufactured during the period of 1848-'50, amounted, as has been already seen, to 1,371,196 poods, (49,363,056 pounds;) adding the quantity manufactured in the kingdom of Poland, (about 50,000 poods,) we may estimate the total quantity manufactured in the country at 1,420,000 poods, (51,120,000 pounds.) The average value of the importation, during the same period, was 3,857,000 roubles—equivalent, at the rate of 60 roubles per pood, to 64,283 poods. The average exportation to Asia represented a value of 2,370,000 roubles—equivalent, at the rate of 40 roubles per pood, to 59,265 poods; so that the importation and the exportation nearly balanced each other. There remained, therefore, for home consumption, 1,420,000 poods, which, distributed over a population of sixty-five and a half millions, gives 0.87 pounds, Russian, per inhabitant. The value of the home manufacture being 56,000,000, and the excess of the importations 1,487,000 roubles, the total value of the consumption is 57,487,000 roubles, or 88 kopecs (100 to the rouble) per inhabitant."

That this proportion has considerably augmented during the past seven years, notwithstanding the war with the western powers, there can be no doubt; and in this respect Russia approaches nearer to other continental European nations than she then did.

The fabrics mostly produced are of a common description, as calicoes, plain cottons, nankins, &c.; the finer fabrics, as muslins, jaconets, fine handkerchiefs, plushes, &c., requiring nicer apparatus and more skilful hands. The former class are woven throughout the villages and country; the latter only in establishments especially constructed for the purpose. The peasants employed themselves weaving only in the intervals of their ordinary labors, and were therefore content with moderate wages; for a piece of 54 archnics in length by 1 in breadth, (somewhat more than three-quarters of a yard,) the price paid was seldom higher than 2 papers, or 1 silver rouble, (silver rouble equal to 75 cents.) At Moscow, and for better weaving, 2 silver roubles was sometimes paid per square archnic; further eastward, in the government of Wladimir, not more than 3 paper kopecs, or $\frac{6}{7}$ kopec silver, for the square archnic, was allowed for weaving, and considerable speculation is carried on to secure the profits by a class of small capitalists, who act as middle men between the substantial capitalists and the weavers.

Mr. Scherer, an authority on this subject, had arranged the cotton fabrics produced in Russia into three classes:

1. Common calicoes, at the average price of 6 kopecs silver per archnic.

2. Medium calicoes, at the average price of $7\frac{1}{2}$ kopecs silver per archnic.

3. Finer calicoes, at the medium price of $8\frac{3}{4}$ kopecs silver per archnic, the length of the piece being from 32 to 54 archnics, and the breadth $\frac{4}{4}$, $\frac{5}{4}$, $\frac{6}{4}$, and $\frac{7}{4}$ archnics.

"Of all branches of the cotton manufacture," observes Prince Tegaborski, "this, in our opinion, is the most important and the most advantageous for the country. It is exercised on an article of consumption accessible to the numerous classes, and it increases the means of our rural population, without interfering with their family habits."

Power loom weaving had been introduced into Russia previous to 1850, the great obstacle to its extension being found in the cost of the machines; the principal seat of the manufacture was at Moscow, though it was also practiced at St. Petersburg, and at other points of the empire. Velveteens, destined for the Asiatic markets, were also manufactured to a considerable extent, from 1,800,000 to 2,000,000 archnics, being annually sent into China, and during the English war with that power, 3,000,000 archnics. Bobbinet machines had also been put into operation at St. Petersburg, being the invention of Haymann, of Mulhouse, in France.

In 1843, M. Scherer reckoned that there were 140 weaving establishments in the country, besides the innumerable looms to be found in the villages and their vicinities, and the number of both was continually increasing, while the native weavers were advancing in skill and the neatness of their work. Printing had been introduced as far back as 1828, and numbers of Swiss and Germans had engaged in it, carrying on a growing and lucrative business. There is much of this work now carried on in the government of Wladimir, the articles produced being generally destined for the cheapest markets, while

those of a dearer class are principally printed at St. Petersburg. At Moscow, both the common and the finer fabrics are printed, and, according to M. Samoiloff, that government contained, in 1843, three hundred and eighty-two (382) weaving and printing establishments, of which the annual products amounted to 12,417,000 roubles, (\$9,312,750;) of these, the city of Moscow and its environs possessed 176, producing to the value of 8,202,000 roubles. Next after the government of Moscow, in this respect, ranked that of Wladimir, and afterwards, that of Kostroma, which together produced as much as Moscow, the three producing five-eighths of the entire value of the cotton industry of the empire, in 1843.

The latest improvements in machinery had been introduced, and the Russian printers were able to compete successfully, as to the style of their work, with the best establishments of France, Germany or Bohemia.

Although, in several portions of his great and most valuable work Prince Tegaborski manifested a decided leaning to the theory of protection to domestic manufactures, his mind was too clear and his judgment too impartial to permit him to close his eyes to the injury which a too thorough devotion to it might inflict, not only on the progress of art in manufacture, but upon the interests of the great mass of consumers; thus he says: "Though it is unquestionable that the prohibitory system has given a great impulse to our manufactures, it has also been attended with its own disadvantages. One of the chief of these, setting out of view the sacrifices imposed on the consumer, has been the moral influence which the system has exerted on the manufacturers themselves. Sheltered from the competition of foreign industry, they have remained absolute masters of the home market, and been able to fix their own prices. Freed from the care of seeking foreign outlets, for, with the increasing demands for consumption, there was no fear of a want of customers, they turned their eyes incessantly to the tariff, which became the main regulator of their calculations. In this comfortable position, it required only some capital, a little intelligence, and less trouble to enable them to realize, in a short time, large profits; and this was just what spoiled them." * * * "In our opinion, the time has arrived when a little more competition from abroad has become requisite, were it only to stimulate the activity and intelligence of our home manufacturers, and to give them that confidence in their own strength which they will never acquire by continuing to lean upon the crutch of custom-house prohibition."

This interesting and instructive review of the cotton manufacture of Russia, as it existed previous to, and in the year 1853, contains this brief summary of the results of the able author's reflections:

1. "That the cotton manufacture, occupying as it does in the total value of its products the next place to the linen manufacture, has attained with us a high degree of importance, and contains the elements of a large development.

2. "That we possess in the different branches of this industry many first class establishments, which may take rank alongside of the principal factories of the continent, or even of England; and that

several of these leave almost nothing to be desired in regard to their technical and mechanical organization.

3. "That, nevertheless, taken as a whole, this manufacture is, with us, greatly behind what it is in other countries, and especially in England, and that the defects which we have already pointed out are manifested principally at the two extremities of the scale, namely: the manufacture of common calicoes and of very fine fabrics; but these faults are gradually disappearing, and in certain departments the progress made of late has been conspicuous.

4. "That if our manufacturers adhere to the right path—that is, if, instead of struggling to produce articles of luxury and of great fineness, requiring highly complicated machinery, and highly skilled operatives, they confine their attention to the improvement of those branches which are most appropriate to the *ensemble* of our material and intellectual resources—we may, for all articles destined to supply the lower and middle classes, soon attain the continental level."

With a population in Europe of sixty-five millions, but a small portion of which rises to what is understood by the phrase "middle classes," and the great mass of which is of the lower class, together with the demand from the Asiatic portion of the empire and the nations which are their customers, Russian manufacturers have here certainly laid before them a most inviting future, and one which should encourage them to both activity and enterprise.

In conclusion, the following recapitulatory table of the four principal branches of Russian manufactures is presented.

	Gross value of manufacture.	Addition to national wealth after deducting cost of raw material.
	<i>Silver roubles.</i>	<i>Silver roubles.</i>
Linen and hemp.....	112,000,000	75,500,000
Woolen	46,000,000	29,500,000
Silk.....	15,000,000	7,500,000
Cotton	56,000,000	35,000,000
Total.....	229,000,000	148,500,000

The number of individuals employed in these different manufactures, either constantly or a portion of the year, including all who are employed in the handling of the raw material or in the production of articles outside the manufacture, is stated at, for

Linen and hemp.....	4,500,000
Woolen	300,000
Silk	40,000
Cotton.....	260,000
Total.....	5,100,000

Under the heading of Foreign Commerce, the same author gives statements of the trade of Russia with other nations, at the period of writing. The exports of cotton manufactures is shown by a table exhibiting the mean annual exportation since 1824, is given in periods of five years. The Russian values are, for the sake of convenience, reduced, in this table, as in those which follow, to our own.

During the five years ending with

1828.....	\$589,725
1833.....	966,300
1838.....	904,500
1843.....	1,269,000
1848.....	1,615,275
1853.....	1,959,525

Note.—In a note to this table it is stated that a change in the official valuation of the articles sold to the Chinese had taken place, so that the *real* augmentation in value of the exportations of cotton manufactures had been since that date as follows :

1842 — 1844.....	\$1,533,825
1845 — 1847.....	1,652,550
1848 — 1850.....	2,027,100
1851 — 1853.....	1,963,425

The market was Asia, as, in the whole period of thirty years, the exports to European countries had summed up to only \$387,000.

The exportation to Asia was thus distributed :

China.....	\$1,048,500, or	53.6 per cent.
Steepes of the Kirghiz.....	605,700, or	31.0 per cent.
Tarschkind	149,400, or	7.6 per cent.
Bokhara	106,800, or	5.5 per cent.
Khiva	22,275, or	1.1 per cent.
Persia, Asiatic Turkey, and Khokan...	23,850, or	1.2 per cent.

Total.....	<u>\$1,956,675,</u>	<u>100.</u>
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The exports to China consisted chiefly of cotton velvets and a species of nankins ; to the other countries mostly of cotton prints.

In the year 1853 Russia imported from England raw cotton to the value of \$5,444,850 ; cotton twist to the value of \$997,025 ; cotton manufactures to the value of \$328,575. In exchange, she sent, among other merchandise, grain to the value of \$8,140,725 ; tallow, of the value of \$6,119,925 ; flax, to the value of \$6,042,375 ; &c., &c., making a total of \$36,995,950, against an importation of a total value of \$19,772,500. Raw cotton, nine-tenths of which was of the growth of the United States, constituted 28.6 per cent. of all that England sent to Russia. In the same year Russia received from the United States raw cotton to the value of \$1,487,700, (being sixty-eight hun-

dredths of total import,) of the value of \$2,187,350. In return, she sent us a total value of \$1,672,875, consisting of sailcloth and coarse linen, linen and hempen yarn, iron, cordage, hemp, bristles, feathers, &c.

The direct trade in raw cotton between the United States and Russia is, however, on the increase, she having received directly from our ports, in 1856, an amount of 124,000 bales, which, at the rather low average of 450 pounds to the bale, would make a total of 55,800,000 pounds.

The communication of M. Boutowen, the president of the council of manufactures and commerce, at Moscow, kindly forwarded to me since I left Russia, will show what are the chief obstacles to the further increase of direct importation. It may here be said, in passing, that they consist, mainly, of the absence of financial facilities, and of the alleged defects in the classification and sorting of cotton in American markets.

Answers to the questions relative to the cotton industry in Russia.

1st question. In Russia there are, at this time, (November, 1857,) about 55 cotton spinneries, with a total of 1,200,000 spindles, and employing near 60,000 hands. Weaving, dyeing, and printing cotton stuffs, occupies four times that number of people.

The principal spinneries are found in the governments of St. Petersburg, Twer, Moscow, and Vladimir. Moscow and Vladimir are the central points for the fabrication of cotton stuffs, but a large quantity of them is also produced in the small manufacturing establishments scattered through the country in the governments of Kalonga, Taroslar, and Rinson.

The expenses for weaving vary greatly, according to the nature of the work by the task or by the day. The day's wages of an adult man are of an average of 40 to 50 silver kopecks. We estimate at about 2 silver roubles the cost of the labor on a pood of yarn, Nos. 38 to 40.

2d question. In 1853 the Russian factories consumed 1,938,000 poods of raw cotton; of this quantity 1,814,282 poods were of American growth, imported almost exclusively by way of Kronstadt, and of which 475,000 poods were of direct importation; the remainder, or at least the greater portion of it, was from the ports of Great Britain. About 124,000 poods were imported from Persia, by way of the Caspian sea, or by the land route, on the backs of camels, from Khiva, Boukhara, Taschkeut, and other countries of Central Asia, by way of Oldenbourg. An insignificant quantity was also imported from the Levant, by way of the Black sea.

The price of American raw cotton, according to the quotations in the market of St. Petersburg, were, in 1853, from five to seven roubles fifty copecs the pood. At Moscow they were as high as eight roubles fifty copecs. At that time Asiatic cotton was selling at Moscow at four roubles fifty copecs. At this time, in 1857, the prices have risen at Moscow, for American cotton, to nine and ten roubles, and for Asiatic to five roubles seventy-five copecs, six roubles seventy-five

copecks, and even seven roubles. Hereafter, when the railroad between Moscow and Liban is finished, the importation of cotton through the latter place will become more advantageous than through Cronstadt. The Asian cottons are used only for the lower numbers of yarns, and cannot compete with American for medium and fine numbers.

3d question. Under the tariff of 1857, raw cotton coming into Russia by way of the European frontier pays a duty of twenty-five copecks the pood; that which comes from Asia pays five per cent. upon the declared value. White cotton yarn is taxed at the rate of three roubles fifty copecks the pood; and so also is candlewick. Dyed yarn of all colors is taxed five roubles the pood. The duties are still very high, and do not in any respect stop the growth of national spinning. In 1856, before the last custom-house reform, the duty on white yarn was five roubles the pood. Under the new tariff, large mills have been undertaken and are about to be put into operation at Vichnii, Volotchok, and in the vicinity of Narva. These establishments are not included in the estimate above given, in answer to question No. 1.

4th question. The spinning mills of the country produce yearly near 1,400,000 poods of yarn, of the value of 21,000,000 silver roubles, the whole of which is consumed by the domestic manufacturers.

5th question. But little sewing thread is fabricated in Russia, the greater part of that description of spun yarn being imported, as well as of the yarns above the numbers 40, 42. In the year 1852, the importation of these two articles combined, by way of the European frontier, was 80,000 poods, of the value of near 1,000,000 silver roubles. Besides, hand-spun yarn was imported from Asia to the amount of 17,436 poods, and value of 143,000 silver roubles; they are used only for the fabrication of the coarsest cloths.

6th question. From the quantity of spun cotton, both domestic and imported into Russia, the quantity of cotton stuffs therein manufactured annually is not less than 1,400,000 poods, of which 400,000 are sent into market bleached, and the remainder dyed or printed. The tissues principally fabricated are calicoes, mitrales, percales, nankins, ordinary indiennes, neck-handkerchiefs for peasant women, and shirtings for peasant men, persiennes for furniture, and in general those articles for which the yarns used vary between the lowest numbers and numbers 38-40. The fabrication of fine and elegant tissues, such as jacanets and muslins, is yet very restricted in extent.

7th question. The value of cotton tissues of all descriptions, fabricated in Russia, may be estimated at about 65,000,000 silver roubles. Nearly all of it is consumed within the country. Russia exports cotton stuffs only to Asia, their value not exceeding 2,500,000 silver roubles.

8th question. Several establishments fabricate mixed tissues of cotton and wool, such as mousselines-de laine, covers for furniture, half cashmeres, cassinets, lastings, &c. It is impossible to estimate, even approximatively, the value of the relative quantity of the cotton which enters into these fabrics. Besides which it is included in the preceeding estimate of the value of yarn consumed in Russia.

9th and 10th questions. There is no direct exchange between Russia and America; nor is there, moreover, between the two countries, direct

commercial relations between merchant and merchant. Some Russians have ordered cotton directly from America, but it was through the intervention of English merchants, who undertook the operation for a commission of *one per cent.*

To purchase raw cotton, without an intermediary at New Orleans, or any other American port, it would be necessary for the Russian manufacturer to send thither an agent, with specie, or drafts bought in Europe. In the actual condition of things, it is much more convenient for him to buy his cotton from English merchants at London or Liverpool, who grant credits more or less extended, at 5 per cent. per annum; besides which, in England, and particularly at Liverpool, where cotton is sold, after having been sorted, and under guaranty, while in America, cotton is put upon the market without being sorted and without guaranty.

It is to be observed that the prices of cotton acquire commercial stability only in the English market; consequently, a Russian speculator, who should go to buy raw cotton in America, even at the period of the crop being gathered, which is the most advantageous for the purchasers, would run the risk of paying for it more than the current price two or three months later. All these causes combined induce the Russian spinner to prefer the English market to the direct purchase of the cotton in America.

Exchange on London is, on three months' bills, from 37 to 38, and even 39 pence the silver rouble. At this date (November, 1857) it has fallen to 34.

11th question. The United States of North America being themselves producers of the principal articles of Russian export, it is difficult to answer this inquiry. However, it is plain that if the Americans could find it to their advantage to import from Russia, in exchange for their raw cotton, her cloths, of medium qualities, worth from eighty copecs to two silver roubles the archnic, with a breadth of two archnics, which are very good, as well as those stuffs called Flanders linens, and sail-cloths, which are already well known on the other side of the Atlantic, it is not to be doubted that it would lead to a more active commercial exchange, and facilitate the establishment of an interchange of products and direct trade between the two countries.

12th question. Raw cotton, in transit through Russia, for the kingdom of Poland, pays a light transit duty of about ten copecs the pood. Cotton brought by sea into the empire does not, since the abolition of the Sound dues, pay any transit duty.

13th question. The best American cotton suffers a waste of near 15 per cent. For a pood of yarn, No. 38, one pood and seven pounds of raw cotton is required.

The Asian cotton is much less pure than American, and shows a greater waste.

A. BOUTOWEN,

Counsellor of State, President of the Section of the Council of Manufactures and Commerce at Moscow.

An English gentleman, long resident at St. Petersburg, and interested in two or more of the mills in the vicinity, furnished me with a memorandum of the amount of raw cotton received at that port up to the 1st of August of the last two years.

In 1856 the amount was 1,343,038 poods, (48,349,368 pounds;) and in 1857 it was 1,645,606 poods, (59,241,816 pounds.) This gentleman owns shares in the "Russian" cotton mill, the capital of which is 1,000,000 roubles, or \$750,000, in shares of 1,000 roubles, with 65,000 spindles, employing 900 hands, and yearly consuming 6,500 bales of cotton; and the new mill, with a capital stock of 800,000 roubles, or \$600,000, also in shares of 1,000 roubles, with 55,000 spindles; it employs 1,300 hands, and consumes annually 10,000 bales of cotton, being last summer, and perhaps still, worked day and night. The Russian mill produced yarns Nos. 20 to 40; the new mill Nos. 30 to 40, all for warp. Its spinning machinery was the English self-acting mules. A spinner, having charge of two mules, could clear 25 roubles (\$19) per month. Ordinary workers got from 7 roubles (\$5 25) to 9 roubles (\$6 85) per month. The proportion of females to males employed was as 600 to 1,000. The raw material cost, on the average, delivered at the factories, $8\frac{1}{2}$ roubles, or \$6 38, the pood, or about $17\frac{7}{10}$ cents per pound, and the description of cotton was from middling to good middling.

During the last eighteen months the price of cotton yarn had ranged between 16 roubles and 22 roubles the pood, or from \$12 to \$16 50 per 36 pounds weight, or from $33\frac{3}{10}$ to $45\frac{8}{10}$ cents per pound. The production to the spinner he believed to be, under the new tariff, about $3\frac{1}{4}$ roubles net the pood, or rather more than 3 pence per pound, (near 6 cents.)

Notwithstanding the largely increased domestic production, a considerable quantity of English yarns were still imported, there having been received at the custom-house in St. Petersburg up to the 1st of August, 1857, eighty-one thousand five hundred and seventy (81,570) poods, (2,936,520 pounds,) against 17,853 poods (642,708 pounds,) up to the same period of the previous year.

The importation of dyed yarns had been, respectively, 1,032 poods (37,152 pounds) in 1857, and 392 poods (14,112 pounds) in 1856; of cotton fabrics and tissues, 10,852 poods (390,672 pounds) in 1857, and 2,079 poods (74,694 pounds) in 1856.

My informant believed that, under the new tariff lately enforced, the importation of dyed yarn and of cotton fabrics and tissues would increase.

The business of spinning had been more profitable than ever during the years 1856-'57, and hence the activity in all the mills, most of which had been working day and night, large additions having been already made to the number of spindles, and still further ones being contemplated, besides the erection of new establishments on a grander scale than had been hitherto known. Whether the business was to continue as prosperous as it has of late been he considered doubtful, as there might be both too great a production of yarn and too great competition among the spinners.

Upon the question of the supply of fuel at reasonable rates one of

the first importance to the Russian manufacturer, where all the establishments are worked by steam—this gentleman informed me that the import of English coal up to the first of August, 1857, had been 49,005 chaldrons, against 25,464, up to the same period in 1856. The facilities for importation were better now than they had formerly been, and its employment would increase. He said that, although 10 roubles' worth of wood made as much heat as the same amount of coal, the latter was preferred.

I was fortunate in procuring a letter of introduction to Mr. Robert Craig, the chief manager of the Newsky mill, in St. Petersburg, and am indebted to him for his very kind reception, and the readiness and intelligence with which he explained the nature and extent of the spinning operations at and near the capital, and the details of his own establishment, which is regarded by all as a model one. At the time of my visit, the Newsky mill was running 60,000 spindles, which were soon to be increased to 140,000. Its annual consumption was 6,000 bales, of about 420 pounds each, all of which, with the exception of a very small quantity of Brazilian, was of the growth of the United States, and was spun into yarns, ranging from No. 30 to 40, the great bulk of which were sent to be disposed of in the Moscow market. The entire supply of the raw cotton used was purchased in Liverpool, and complaint was made that it had, during the preceding year, contained more sand and dirt than usual; there had been, however, but little wastage, as the high prices to which the article had risen compelled the spinners to work it all up.

The policy of purchasing in the Liverpool market, instead of at New Orleans, Mobile, or Charleston, was explained to be on account of the more reliable classification or sorting at Liverpool than in the United States. The duty of 25 kopecs ($\frac{1}{4}$ of a rouble, or $18\frac{3}{4}$ cents) per pood, he considered as merely nominal, and not calculated at all to affect consumption. The mill annually produced about 62,000 poods, (2,232,000 pounds,) or, by spindle, one pood each of yarns, which, at an average of $18\frac{3}{4}$ roubles the pood, were worth 1,162,500 roubles, or \$871,875. At that time the market was good and rising. Mr. Craig regarded the protection under the tariff, to the spinner, as equal to about $5\frac{1}{2}d.$ per pound on the yarns spun. The mill employed 700 hands, nearly all of whom were boys, women, and girls; men not being liked, or as readily to be had. The wages paid to this working force for 24 working days in a month, were 8,000 roubles, (\$6,000,) they finding themselves. The operatives whom I saw during their dinner hour were healthy and cheerful in appearance, and I was told by Mr. Craig that they were always contented, and a much better class of people than they had sometimes been represented.

With regard to the future consumption of raw cotton in the country, he regarded the prospect for its increase as very good, and on this point expressed some solicitude as to the capacities of our cotton-growing States to keep up with the increasing demand throughout the civilized world for that raw material, as he felt satisfied that to the United States must the world look as the only certain and reliable source of supply for the great bulk of the demand. I felt authorized to reply, that, if left to themselves and paid remunerative

prices, our planters could largely increase their production, so that its amount in the total production of the world would be proportionably much greater even than it now was. In his remarks on this point he showed a correct appreciation of the position and advantages of our cotton growers, as contrasted with those of other countries.

At the establishment of Messrs. Thomas Wright & Co., near St. Petersburg, I was cordially received by the chief manager, also an Englishman, and my questions cheerfully answered.

This mill has 85,000 spindles, employs 700 hands, nearly all boys, women or girls, whose wages range from 10 to 20 roubles per month, and consumes, annually, about 70,000 poods of raw cotton, (2,500,000 pounds,) and turns out nearly the same weight of cotton yarn, No. 40. The cotton used is New Orleans, Upland, and Boweds, mostly of midling quality, and its average cost, on reaching the mill, is $8\frac{1}{4}$ roubles (\$6 19) to $8\frac{1}{2}$ roubles (\$6 38) per pood. The waste did not exceed five per cent.; supplies purchased in England. The price of the yarns spun varied from 13 roubles (\$9 75) to 21 roubles (\$15 75) per pood, according to the demand.

There are several other mills at or near the capital; among them the Imperial factory, belonging to the government, at Alexandroffsky, with a force of 55,000 spindles. It was said not to pay any profit on its operations. Nearly all these various establishments had lately made considerable additions to their number of spindles, or were about to do so. The quality of cotton consumed, that of the yarns spun, the rate of wages paid, &c., were, I was told, quite uniform. The machinery is generally of the very best English manufacture embracing all the most recent improvements on inventions. The same thing may be said of the mills at or near Moscow.

The largest cotton importing house in Russia is that of Messrs. J. H. Frierichs & Co., of St. Petersburg, the resident partner being Mr. Marsh to whom I am, indebted for acts of courtesy and valuable information as to the state of the demand for cotton, present and prospective, &c., &c.

The extent of the business affairs of this house in Russia may be judged of by the fact, that of 2,000,000 poods of cotton imported into Russia in 1856, 850,000 poods passed through its hands. From Mr. Marsh I learned that the importations were almost exclusively of American growth, Surats being never used, except when mixed with the better and longer stapled American cottons, a process not yet understood by the native spinners. The firm had tried the experiment of importing two cargoes of Surats, but had concluded to order them to Liverpool for sale, finding they did not suit the Russian market.

Mr. Marsh considers that the Russian practice of buying in the Liverpool market is, in no small degree, caused by the fact that the managers of the mills, who are all English, are unwilling to receive stocks purchased elsewhere, believing that in England alone the proper classifications for the descriptions of yarn in demand in the Russian market are to be had, and their influence prevails over other considerations with the owners.

In August last, as Mr. Marsh told me, all the customers of his house had obtained their supply of raw cotton up to the summer, and

several even until the month of October, 1858. At the same time he estimated the stock of cotton then on sale at St. Petersburg at 25,000 bales. The house of J. H. Frierichs & Co., which, in addition to its Russian business, has a large custom in Germany, had of late decided to change its former system of ordering its purchases of raw cotton in the United States to Liverpool, and hereafter to send them to Grimsby, on the east coast of England, whence they might be more conveniently and rapidly distributed to the ports of the North sea and the Baltic.

As to the prospect of cotton spinning in Russia, he regarded it as quite good, although it was not unlikely that some who were engaged in it, without ever having had the necessary capital, would have to succumb under increasing competition and high prices.

It is a source of much regret to me that the statement, promised by Mr. Marsh, of the importation of raw cotton, yarns, fabrics, and tissues of all descriptions into Russia, with the average prices, and a list of the mills, the number of spindles, looms, &c., for the last four years, has not yet come to hand.

The Russian cotton manufacturer, while subject to disadvantages caused by remoteness from the ports of the country which grows not less than nine-tenths of the raw material which he needs, from his dependence for those supplies on the intermediate market of England, whereby he has to pay an enhanced price, which varies according to the abundance of money, the activity of speculative demand, or of the manufacturing interest in that country, to say nothing of the long array of broker's and factor's commissions, charges for handling, warehousing, sorting, banker's profits on several sets of bills of exchange, affecting the raw material, and the difficulty attending the navigation of the Baltic sea, with its strong currents and interruption of navigation for more than half the year, has, nevertheless, advantages which insure him such profits, ordinarily, as make him content with his position. He has abundant and cheap labor at his command, suffers no solicitude as to strikes or combinations among his operatives; and what is to him better than all, has a certain and profitable market for all articles produced by his capital and labor. There is but little prospect of this market failing for a long series of years to come, though the profits it now affords may be diminished to a point more nearly approaching the standard in other countries for similar industry.

The importance and expediency of direct trade between Russia and this country is fully recognized by her government and the more intelligent of her subjects. It is understood that the Emperor is desirous of the establishment of American houses at St. Petersburg and Odessa, in order that the experiment of direct commercial intercourse may be fairly tried.

The modifications made in the old tariff system by the tariff lately ordained shows that liberal ideas, in that respect, influence the sovereign and his ministers.

The great system of railroads, projected to promote rapid and cheap communication between the shores of the Baltic and those of the Black sea, and between the banks of the Neva and those of the Volga, will be prosecuted. Already the branch of the line between St. Peters-

burg and Warsaw, which is directed on Liban, upon the Baltic, and almost touching the frontier of Russia, is being constructed with all practicable despatch, and, when finished, will have an immense influence on the commerce of the country with western Europe and the United States, as ships will be able to go there and discharge their cargoes a month earlier than they can do it now; that they have to contend, not only with the heavy current coming from the Gulf of Bothnia, and the north winds which sweep down it, but also with the ice in the Gulf of Finland, which rarely breaks up much before the 1st of May, and closes it by the 1st of November.

The Russian government views the commerce by way of the Black sea with great favor, and in the new tariff makes a discrimination in the rate of duty on cotton or cotton manufactures coming into the empire in that direction. Besides, being rarely frozen over in winter, the port of Odessa offers to ships carrying thither cargoes of cotton certain and profitable freights to western Europe of grain, tallow, hides, or other articles of domestic growth, of which it is the great depot.

Besides the gentlemen named above as having aided me in my inquiry, my particular thanks are due to Mr. Seymour, the minister, and Mr. Pierce, the secretary of our legation at St. Petersburg, and to Mr. Claxton, consul at Moscow, all of whom exhibited much interest in the inquiry with which I was charged, and a desire to forward it to the extent of their power.

THE ZOLLVEREIN STATES.

The German States have consumed a portion of the cotton crop of the United States since a period shortly posterior to its introduction in any considerable quantities into the European markets; and during the last decennial period this consumption on their part of the raw material, whether of the growth of our own or other countries, has increased to such an extent as to command the serious attention of any one who takes a survey of the condition of cotton manufacture in Europe, and its influences on the industry, the trade, and the general well-being of those populations among whom it is carried on.

Eleven German sovereignties have united themselves with the free Hanseatic city of Frankfort-on-the-Main for the formation of the Zollverein, or Customs' Union, at the head of which stands the kingdom of Prussia, the most important in population and political position, and at whose capital the affairs of the Union are managed. In the year 1853 the total number of inhabitants of this commercial league was 30,687,939, which had increased, by the census taken in December, 1855, to the figure of 32,559,161, of which Prussia counted 17,286,284.

In the year 1847 the total import of raw cotton was 364,590 Zoll centners, equivalent to 40,326,404 of our pounds. In 1853 it had increased to 810,439 centners, or 89,395,474 pounds, having much more than doubled in the period of thirteen years. It will be seen hereafter that during the same period a marked decrease in the importation of cotton yarns had taken place, which shows that the

demand was becoming yearly less and less dependent for supply upon the foreign spinning mills.

In his "*Statistical Review of the most important objects of the Trade and Consumption of the German Zollverein*," for the period from 1849 to 1853, published at Berlin last summer, Dr. C. F. Dieterici, director of the statistical bureau of Prussia, furnishes a series of illustrative tables which show the increasing importance of the cotton trade. As the work is regarded as of standard authority, the tables which accompany the report have, where credit is not given to other sources, been compiled from it.

The table A exhibits the total of the imports, exports, and transit of raw cotton into, from, or through each of the States of the Union during the year 1853; it will be seen that out of a total of 91,126,119 pounds imported, Prussia received 71,274,407 pounds. This was owing rather to her geographical position, and the facilities for transportation which it afforded, than to the extent of her manufacture, as, in that respect, she is exceeded by Saxony, which appears to have taken for consumption much less of the raw material. But it is difficult to judge of the actual extent of consumption in any of the States of the Customs' Union from these tables, for the reason that raw cotton being free of duty there is no necessity for keeping an account of the real amount which goes into any one of the States composing it. In the year 1856 there were, according to Mr. George Von Viebahn, chief of division of the financial department of the ministry of commerce, &c., at Berlin, in the kingdom of Prussia, eighty-eight spinneries, with an aggregate of 288,907 spindles, which, at an estimate of forty pounds, each, of the raw material per annum, required only 11,556,280 pounds of it.

According to official publications, kindly furnished me by Mr. Von Viebahn, the importation of raw cotton into the Zollverein during the year 1855 amounted to 936,406 centners, or 118,820,546 pounds; and for the first quarter of 1857, to 238,323 centners, or 26,288,219 pounds.

With regard to the extent and condition of cotton manufacture, it may be said that its march, particularly during the past twenty years, has been, on the whole, steady and progressive, as within that period the extension of railroads into nearly every portion of the territory has afforded facilities which were before unknown for the speedy and cheap transportation of both the raw material and of articles fabricated from it; thus bringing into play the natural advantages for manufacturing possessed by many of the interior countries of Germany, but which, owing to difficulty of access, had before remained unused. In this way an impetus has been given to manufacturing industry in Bavaria, Wurtemberg, and the upper portions of the Grand Duchy of Baden, which promises, at no distant day, very important results.

Cotton spinning by machinery has been known in Saxony for nearly forty years; but neither there, nor in any other of the States composing the Zollverein, does it appear to have made any very marked progress until the year 1836, which is spoken of by all who speak or write on the subject in Germany as one fraught with interest in its history, as it was the era of the establishment in Bavaria and elsewhere of several extensive establishments modelled on those of England, and on a

scale hitherto unknown, which, having met with abundant success in their operations, gave encouragement to others to embark their surplus capital in similar enterprises. Labor being abundant and cheap, and supplies of the raw material readily obtainable, the German spinners have been able, by a system of judicious management, and by studying the wants of their home markets, to place themselves on a firm footing. And the manufacturer of the present day, although subject to suffering from occasional fluctuations from financial crises in the commercial world, on the whole, holds a position which is quite satisfactory.

Dr. Engel, the distinguished statistician, of Dresden, in his History of Cotton Spinning in Saxony, lately published, speaking of the condition and extent of those establishments in the Zollverein devoted to it, remarks: "The Zollverein, in 1855, contained 1,200,000 spindles, consuming 63,600,000 pounds of raw cotton, and producing yearly 50,880,000 pounds of yarn, with a waste of 20 per cent. on the raw material; the annual yield per spindle being 42.4 pounds, which appears higher than the yield in England, but the difference is explained by the average number of English yarns being much higher." And again: "A comparison of these figures with the English is very encouraging to the enterprising spirit of the German mill owners. The supply thus furnished is equal to 1.56 pounds to each inhabitant. Estimating the actual consumption at only three pounds per inhabitant, and supposing the supply to be altogether of domestic spinning, the amount of yarn produced would be 47,000,000 pounds more than is above stated, which would require an addition of from one to one and a half million of spindles."

Since the year 1836, there have been established very extensive spinning mills at Augsburg, Kempten, and Immenstadt, in Bavaria; Urach, in Wurtemberg; Arlen, Ettlingen, and other points, in Baden; and at various places in Rhenish Prussia, Rhenish Bavaria, and Silesia.

According to Dr. Engel, the leading causes which have favored the development of cotton spinning are the magnificent water power found in the highland districts of some of the States, the encouragement afforded by government, and the success of the establishments on a large scale, and in imitation of the English system. The German spinners have not attempted, so far, competition with England, or other countries in fine spinning, avoiding thus both the increased expense of fitting their mills with the necessary machinery, and the additional cost of working up the raw material.

By adhering to the plan of spinning the lower numbers only, the average in 1855 being No. 23, they have obtained almost the entire supply of the home market. The duties being specific, (by weight,) instead of *ad valorem*, they would labor under great disadvantages in a struggle with a country so advanced in the art of cotton spinning as England, as the duties by weight in fine yarns, although greater nominally, are really much less than those on the coarser and heavier qualities; hence, a considerable import of the finer numbers of yarns is still kept up, while that of the lower ones is quite limited, they having been appropriated by the domestic spinners, who have also, as

Doctor Engel thinks, a fine prospect for spinning hereafter, with profit, the finer ones also.

The table B presents a statement of the imports, exports, and transits of unbleached single or double twisted cotton yarn into, from, or through the States of the Zollverein during the years 1851-'53; and that marked C shows also the import, export, and transit of unbleached yarns, treble-twisted or over, during the same period.

Of the first named descriptions the imports were as follows: 1851, 53,659,839 pounds; 1852, 51,209,322 pounds; 1853, 52,517,991 pounds. The exports were, in 1851, 1,498,379 pounds; in 1852, 1,461,210 pounds; in 1853, 1,500,034 pounds. The transits were, in 1851, 8,106,512 pounds; in 1852, 10,493,931 pounds; and in 1853, 9,634,529 pounds.

Of unbleached, treble-twisted yarns, the imports were, in 1851, 336,661 pounds; in 1852, 354,977 pounds; and in 1853, 336,267 pounds. The exports were, in 1851, 1,938,410 pounds; in 1852, 2,212,054 pounds; and in 1853, 2,740,949 pounds.

The transits were, in 1851, 1,311,848 pounds; in 1852, 1,178,836 pounds; and in 1853, 1,086,062 pounds. The official documents above spoken of, as furnished by Mr. Von Viebahn, show an importation of unbleached, single and double twisted yarns, in 1855, of 492,186 centners, or 54,290,576 pounds; and in 1856, of 493,490 centners, or 54,434,413 pounds; and of unbleached, treble twisted yarns, an import, in 1855, of 2,453 centners, or 270,579 pounds; and in 1856, of 2,495 centners, or 275,211 pounds.

The values are not given in any of these tables, not being required at the custom-houses; but the *Germania*, a politico-economical journal, published at Heidelberg, and regarded as reliable authority, places the value of the entire import of cotton yarn, in 1855, at the sum of 14,564,400 thalers, which, at 69 cents each, is equal to \$10,049,436; and in 1856, at 15,164,690 thalers, or \$10,463,636.

The duty on unbleached, single or double twisted cotton yarn, is 3 thalers, or \$2 07, the centner ($110\frac{355}{1000}$ pounds); and on unbleached, treble, or over-twisted yarn, it is 8 thalers, or \$5 22, the centner.

The transit duties are regulated according to the tariffs of the States through which the rivers, on which most of the carriage is accomplished, run. They vary somewhat, but are not onerous. Considerable time might be required to ascertain their precise nature and amount.

Of cotton tissues, hosiery, &c., the importation in 1855 was 7,764 centners, or 856,408 pounds; and in 1856 it was 9,139 centners, or 1,008,078 pounds, upon which the duty was 50 thalers, or \$34 50, the centner.

In the kingdom of Prussia, there were in the year 1856 eighty-eight spinning mills, running 288,907 spindles. In 1852 there were in the kingdom 71,267 looms, of which 2,500 were machine looms, and the remainder hand. They produced every description of ordinary to fine cotton, pure or mixed stuffs. The cotton manufacture of Prussia is for the most part carried on in her Rhenish provinces, which were not visited by me, for want of time. Of late, that branch of industry has made progress in and around Berlin.

Saxony has hitherto been considered at the head of cotton manufac-

turing industry among the States of the Zollverein, though of late Bavaria has begun to contest with her this supremacy. The work of Dr. Engel, quoted above, gives many details on the past progress and the present condition of the industry.

In 1857, the number of mills in the kingdom, according to a statement kindly furnished me by Dr. Christian A. Weinlig, chief of division, &c., in the ministry of finance, was 135, running 600,000 spindles. The consumption of raw cotton was about 30,000,000 pounds, of which 12,950,595 pounds, were of the growth of the United States, almost all of which was imported *via* Bremen; and 11,432,463 pounds of the growth of the East Indies, imported *via* Hamburg.

On the American cotton the waste averaged 18 per cent.; on the East Indian, 24 per cent.; making a general average waste of 20.81 per cent.

The actual production of yarn of all numbers—the average being 23—was 19,308,160 pounds, of the total value of 5,470,645 thalers. The prices of yarn are regulated by those current at the time in the English or Hamburg markets, adding two new groschen, or four cents, for duty, transportation, &c.

The domestic production of yarn is all consumed at home; besides which, there is an additional demand for about 15,000,000 pounds English, of yarn and twist.

There are, it is said, but very few purchases of American cotton made by direct negotiation, intermediate agencies at Bremen or in England being used. This remark will apply also to most other parts of Germany.

In the year 1857 there were in Saxony 20,000 looms, of which 500 were machine, employed in weaving pure cotton tissues; from 8,000 to 10,000 looms employed in weaving tissues of mixed cotton and linen; and from 20,000 to 25,000 looms, of which 1,000 were machine, employed in weaving tissues of mixed cotton and wool; and 3,000 stocking weaving looms, about 400 of which consumed pure cotton thread.

Mixed goods and tissues are the chief productions of Saxon manufactures, consisting mainly of half cotton and half linen clothing stuffs, carpets, table and furniture covers, lastings, &c. There are also fabrics of cotton, mixed with wool or silk, too various for particular mention. In 1855, according to Dr. Engel, the employes of the spinneries were:

Adult males.....	4,216
Adult females.....	4,717
Boys.....	1,487
Girls.....	940
Officers, &c.....	276

Total amount of wages and salaries paid, \$906,800. Of these, the men received 36.05 per cent.; the women, 40.84 per cent.; the boys, 12.71 per cent.; the girls, 8.04 per cent.; and the officers, 2.36 per cent.

To the United States the exports consisted principally of hosiery, valued at two millions of thalers; cotton and linen goods, valued at one million of thalers; woolen cloths, valued at one and a half

million of thalers; and other woolen goods, valued at half a million thalers.

Want of time prevented my visiting either Bavaria, Wurtemberg or Baden, though each offered an interesting field of investigation.

Much might be done by a properly accredited agent of the government, who could remain long enough in the different States of the Zollverein to make the acquaintance of the leading spinners in doing away with their erroneous ideas as to the production and trade in cotton, and of the practicability of direct trade between those countries and our own. Their errors in this respect have been created and fostered, for the most part, by parties who have profited largely as the intermediaries of an indirect commercial intercourse, and whose plain interest it is to keep up the existing system.

The operations of the merchants of Bremen have, indeed, done much to relieve the consumers of the interior from the additional price they have been paying for the raw material, in the shape of profits, commissions, and various other charges, to English factors, brokers, bankers, &c.; but there remains yet much to be done, which, once effected, cannot fail, in the end, to benefit greatly both the country of production and that of consumption.

At present, the average price of cotton delivered at the mills in Saxony is 70 pfennings for Surats, and 100 pfennings for American "middlings," after being cleaned. The two descriptions are generally mixed in the proportion of one-third Surat to two-thirds American. Of cotton yarn, the average price is 85 pfennings per pound. Six pfennings are equal to one cent of our currency.

A.

Statement of the import, export, and transit of cotton wool into and from each of the States of the Zollverein during the year 1853; the weights reduced to the standard of the United States.

States.	Import.	Export.	Transit.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Prussia, with Luxemburg-----	9,494		
Bavaria-----	71,274,407		
Saxony-----	902,075	527,919	
Wurtemberg-----	15,239,739	14,084,221	5,969,250
Baden-----	27,025	171,966	3,202,254
Electoral Hesse-----	3,086,224	185,091	8,226,657
Duchy of Hesse-----	43,681		
Thuringia-----			
Brunswick-----	15,333		
Nassau-----	525,493		9,165
Frankfort-on-the-Main-----			
Add import by the post-----	2,648		
Total-----	91,126,119	20,943,323	19,660,894

B.

A statement of the imports, exports, and transit of unbleached single and double twisted cotton yarn into, from, and through the States of the Zollverein during the years 1851, 1852, and 1853, derived from official sources; weights reduced to the standard of the United States.

States.	1851.			1852.			1853.		
	Imports.	Exports.	Transit.	Imports.	Exports.	Transit.	Imports.	Exports.	Transit.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Prussia.....	39,345,462	788,562	1,300,223	38,377,976	885,528	1,964,421	38,988,818	973,440	1,314,561
Luxemburg.....	29,892	552	-----	35,518	-----	-----	30,665	-----	-----
Bavaria.....	1,885,001	66,844	3,953,111	1,568,978	46,328	4,121,735	1,748,333	49,305	4,230,086
Saxony.....	7,417,449	552,517	3,653,193	6,787,619	480,158	4,273,867	7,224,316	396,657	4,060,216
Wurtemberg.....	946,086	29,347	23,936	749,854	11,799	70,485	710,413	26,473	17,429
Baden.....	667,348	55,814	169,431	625,735	35,411	33,643	841,846	23,274	12,127
Electoral Hesse.....	320,541	-----	331	192,482	-----	221	225,463	110	110
Duchy of Hesse.....	313,047	-----	-----	271,901	-----	-----	300,030	-----	-----
Thuringia.....	1,591,975	-----	-----	1,546,807	-----	-----	1,544,490	-----	-----
Brunswick.....	77,655	4,743	6,289	81,071	1,986	29,559	82,287	30,775	-----
Nassau.....	20,075	-----	-----	44,893	-----	-----	22,832	-----	-----
Frankfort-on-the-Main.....	1,037,308	-----	-----	936,488	-----	-----	798,498	-----	-----
Total.....	53,659,839	1,498,379	8,106,512	51,209,322	1,461,210	10,493,931	52,517,991	1,500,034	9,634,529

Statement of unbleached cotton yarn, treble twisted and above, imported, exported, and in transit to, from, and through the States of the Zollverein during the years 1851 to 1853, also from official sources; with the weights reduced to those of the United States.

States.	1851.			1852.			1853.		
	Imports.	Exports.	Transit.	Imports.	Exports.	Transit.	Imports.	Exports.	Transit.
	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
Prussia	158,729	1,366,898	840,188	165,016	1,624,241	680,258	156,192	2,007,889	707,827
Luxemburg	1,324	—	—	2,095	—	—	2,977	110	—
Bavaria	12,353	85,707	289,992	11,581	98,391	314,369	11,250	32,208	187,408
Saxony	29,450	395,774	13,122	39,610	350,990	18,851	44,673	314,921	39,490
Wurtemberg	5,515	6,288	27,576	7,059	31,988	33,423	4,964	28,789	30,444
Baden	10,921	64,551	138,213	12,355	73,573	131,483	9,817	63,977	119,239
Electoral Hesse	2,757	2,096	—	7,507	2,757	—	7,498	8,935	—
Duchy of Hesse	9,937	—	—	7,831	—	—	10,698	—	—
Thuringia	6,731	—	—	2,316	—	—	5,911	—	—
Brunswick	5,515	17,096	2,757	4,964	30,114	452	2,647	14,120	1,654
Nassau	3,310	—	—	—	—	—	—	—	—
Frankfort-on-the-Main ..	90,119	—	—	94,642	—	—	79,640	—	—
Total	336,661	1,938,410	1,311,848	354,977	2,212,054	1,178,836	336,267	2,470,949	1,086,062

THE AUSTRIAN EMPIRE.

It was not in my power to obtain any information as to the date of the establishment of cotton spinning and manufacture in Austria or any of its German provinces. Of late years they have, however, increased very considerably, having shared the general prosperity of that branch of industry in Europe. The import of cotton wool for the year 1856, according to the official review of the imports and exports for that year, published at Vienna in 1857, amounted to 768,197 Zoll centners, which, at $110\frac{3.55}{1000}$ United States pounds, each, would make 84,774,371 United States pounds; of this 758,895 Zoll centners, or 83,747,858 pounds, were for consumption, and 9,302 Zoll centners, or 1,026,503 pounds, were in transit.

The importation of 1856, compared with that of 1855, exhibited an increase of 140,936 Zoll centners, or 15,552,993 pounds.

The value of the cotton consumed was, in Austrian convention, florins 23,760,070, equal, at $48\frac{1}{2}$ cents each, to the sum of \$10,938,634.

Upon raw cotton and its waste, imported for consumption, no duty is levied; if it be in transit, there is a small duty of six kreutzers, or $4\frac{8}{10}$ cents per Zoll centner.

"The report of the Department of Statistics, published by the Directory of Administrative Statistics of the Imperial Ministry of Commerce for the fourth year, Vienna, 1855," gives a complete list of the cotton spineries of the empire in the year 1854, from which the following table has been compiled:

Provinces.	Mills.	No. of spindles.	Description of yarns, &c.
Upper Austria -----	47	569,979	No. 6 up to 40, 60, 80, 100, 110, 120 140.
Lower Austria -----	9	83,590	No. 4 to 44, 50, 60, 80, 100.
Styria -----	3	25,464	No. 6 to 40, 100.
Carniola -----	1	12,000	No. 6 to 40.
Goerz -----	2	18,300	No. 4 to 44, 4 to 26.
Tyrol -----	22	214,094	No. 4 to 46, 6 to 46, 10 to 40, 30 to 40.
Bohemia -----	71	449,906	No. 1, 4, and 6, to 20, 30, 40, 50, 60, 80, 90, 100, 120.
Lombardy -----	30	129,046	No. 4 to 20, 6 to 20, 6 to 30, 6 to 40, 20 to 100.
Venice -----	2	28,464	No. 6 to 40.
Hungary -----	1	1,440	No. 6 to 16, 6 to 20.
Transylvania -----	1	960	No. 6 to 16.
Total -----	189	1,533,243	

Several of these mills, also, spin twist, particularly those of Felixdorf, No. 30-100;) Truman, 6-140;) and Haratic, (20-160.)

It will be perceived that the great bulk of Austrian spun yarns are of the lowest numbers, ranging from No. 4 to No 50, upon which the tariff affords a very high and almost prohibitive protection.

The yarns produced are mostly unbleached, and a ready home market is found for them.

The demand is principally for middling qualities 16-24, which are worth, ordinarily, in the Trieste market $5\frac{1}{2}$ florins (\$2 70) the package of 10 English pounds. When imported, they are sent chiefly to Hungary, Bosnia and Wallachia. Bleached yarns of the lower numbers imported cannot ordinarily compete, by reason of the duty, with those of domestic production. At Trieste, which is a free port, they are worth, generally, from 4 florins (\$1 94) to $4\frac{1}{2}$ florins (\$2 18) the package of 10 English pounds, and are in demand for the Levant markets. The duty on bleached yarn and twist is $46\frac{1}{2}$ kreutzers (near 36 cents) the package of 10 English pounds. On bleached and twisted yarn the duty is $54\frac{1}{2}$ kreutzers (near 44 cents) in the package of 10 English pounds, while on those which are dyed it is 1 florin 22 kreutzers (near 65 cents) for the same measure, and they are also excluded from the domestic market by reason of the duties.

The domestic yarns are worth at Prague, which is the great centre of production, the province of Bohemia having 71 mills and 449,906 spindles out of a total of 1,533,243, from 42 to 45 kreutzers (35 to 36 cents) the English pound. This does not, as I was told, materially differ from the prices at other points of Austria.

A very active spinning business is carried on at Prague and the neighboring districts of Bohemia, the raw material being almost wholly supplied by way of Bremen.

The mill of Mr. Richter—the only one visited by me—has 16,000 spindles, employs 500 hands in spinning and weaving, and consumes, on an average, 10,000 pounds of cotton per week, nearly all of which is “middling” Georgia and Louisiana, which, delivered at the mill, cost from 45 florins (\$21 83) to 50 florins (\$24 25) the centner, ($110\frac{3}{10}\frac{5}{100}$ United States pounds.)

Surat is used but to a limited extent, and for the lowest numbers, being mixed with the other varieties.

The yarns spun are chiefly Nos. 25 and 26, which are woven into ordinary cloths. The yarn of this and other lower numbers is worth at Prague from 42 to 45 kreutzers ($33\frac{6}{10}$ to 36 cents) the United States pound. The wages paid are, for a head spinner, from 7 to 8 florins (\$3 40 to \$3 86) per week. He is allowed one assistant, at 2 florins (97 cents,) and two boys, one of whom receives one florin 48 kreutzers ($86\frac{4}{10}$ cents,) and the other one florin 30 kreutzers (72 cents) per week. For women and girls, the wages are from 15 to 25 kreutzers (12 to 20 cents) per day.

For weavers, the average wages are 3 florins (\$1 45) per week. The working day begins at 5 a. m., and ends at 7 p. m., and an ordinary weaver can weave from 24 to 30 Austrian ells (20 to $26\frac{2}{3}$ yards) per week.

Spinning is also carried on in all the other provinces named in the table to a greater or less extent; the difference being mainly in the fineness or coarseness of the yarns turned out. In the two provinces (Upper and Lower Austria) of Austria proper and Styria, a greater proportion of the finer numbers are turned out; but the new material consumed continues to be, for by far the greater part, of the growth of the United States; and, as observed in a former part of this report, imported for the mills in the Vorarlberg, Vienna, and Styria, by way

of Bremen or Hamburg, on account of the superior advantages the first named city especially presents above Trieste or Vienna in the lowness of freights.

The Movimento della Navigazione e Commercio, in Trieste, nell' anno solare 1856—The Movement in Commerce and Navigation, in Trieste, for the solar year 1856—an official publication, gives the following statement of the importation of raw cotton into that port in the year 1856, with the countries or ports from which it came :

	Centners.
From Austrian ports.....	427
The Papal States.....	108
Greece.....	99
Sardinia.....	184
France on the Mediterranean.....	25
France on the Atlantic.....	470
Malta.....	12
Great Britain and Ireland.....	60,594
Netherlands.....	7
Turkey.....	5,180
Egypt.....	102,199
St. Domingo.....	150
United States.....	133,020
Total.....	302,430
Or, 33,375,326 pounds.	

The exportations for the same period were, by land, 171,387 centners, or 18,913,412 pounds ; and by sea as follows :

	Centners.
To Austrian ports.....	80,180
Papal States.....	442
Greece.....	26
Kingdom of Naples.....	1,449
Ionian Islands.....	43
Tuscany.....	38
Turkey... ..	178
Total.....	82,356
Or, 9,088,397 pounds.	

The cotton exported to Austrian ports went, as I was informed, into Lombardy, by way of the river Po ; and what was not demanded there went over the Alps into Tyrol, the Vorarlberg, and a portion also into Switzerland.

The 171,387 centners exported by land was nearly all sent into Styria, Carniola, Görz, &c. What effect the completion and putting into operation of the entire railroad line between Trieste and Vienna, which was accomplished last summer, may have upon the importation of cotton, particularly from the United States, the East Indies, or

South America, into Trieste, remains yet to be seen. The great obstacle to any marked increase is the uncertainty of obtaining return freights for cotton-laden vessels; and unless that be removed, Bremen will probably continue to maintain her supremacy as the entrepot for the much greater part of the raw material, unless Genoa should deprive her of a portion of the trade, now that the Sandinian and Lombard lines of railroad are so extensive, and by which means, it is thought, Lombardy, the Tyrol, the Vorarlberg, and even Venice herself, perhaps, may be supplied at a less cost of transportation than by ships going to either Venice or Trieste, as that port offers much greater prospects of ready and paying return freights than either of the others.

Through the kind attention of Messrs. S. & A. Blumenthal, bankers at Venice, I obtained the following statement of the amount and value of cotton wool imported into that port during the years 1855 and 1856, and for the first seven months of 1857. The weights, French kilogrammes, and the values, Austrian livres, are here reduced to their corresponding values with us.

1855.—85,867 pounds; value, \$10,820.

1856.—99,256 pounds; value, \$12,654.

1857, (seven months.)—58,123 pounds; value, \$7,462.

The condition of the spinning and cotton manufacturing interest in the Lombardo-Venitian provinces is one of great prosperity, as none but articles which command a ready and profitable home market are turned out, the cost of production, deducting that of the raw material, being quite moderate.

The communication which follows is from the highly respectable firm of Antonio and Andrea Ponti, of Milan, who appeared to take the greatest pleasure in giving information, so far as it related to Lombardy and the other Italian provinces of Austria.

The importation of raw cotton into Lombardy is estimated at 30,000 bales, of which 25,000 are of the growth of the United States, and 5,000 of the Indies and the Levant—*i. e.*, cottons coming from Madras, Bombay and Surat, and cottons coming from Macedonia, Smyrna and Malta.

The much greater part of the cotton from the United States, Malta, and the Indies, is received through the port of Genoa, and nearly all the cottons from the Levant are imported by way of Trieste, where there is a great entrepot of those qualities, and formerly a much more considerable importation was counted, but the low prices of cotton in America during the years 1840, 1844, 1848, 1849, and 1850, have broken up the culture of cotton in the countries of the Levant.

Before the opening of the railroad from Genoa to Novara, a great deal of the cotton from the United States came in by way of Trieste, and was sent to Milan by the river Po as far as Mantua, and afterwards, by wagon, to its destination; but now the transport by railroad furnishes a more rapid and economical way, and has annihilated the commerce of Trieste as regards that article, Genoa being much nearer to Milan and possessing superior advantages, although the entire line of railway from Milan to Venice and Trieste is now open.

The transportation from Genoa to Milan, including all expenses of discharging, warehousing, &c., is calculated at $\frac{1}{2}$ cent per dollar on the American pound, while, on the contrary, the transportation from Trieste to Milan would cost twice as much and take twice the time.

At Genoa cotton is bought directly through brokers, without other expense than a commission of one-half of 1 per cent, and is imported at less expense from the country of its growth than at either Trieste or Venice.

The first importation of United States cotton into Genoa dates from 1827, by our house of Ponti, a member of which was, in that year, at New Orleans, making direct purchases, and afterwards, in 1841, the writer of this resided in the United States for the long period of eleven years, and carried on trade in this article by way of the Mediterranean, bringing the consumption up to the point at which it now is, while the previous consumption was only one-quarter American to three-quarters Levant. Now many of the largest spinners import cotton direct from the United States, and are able to furnish a good supply to the smaller spinners.

In Lombardy we count 33 spinning mills of 800 horse power, 500 mule jennies, and 140,000 spindles; of this number the province of Milan contains 18 mills of 450 horse-power, 300 mule jennies, and 80,000 spindles; the remaining 15 mills are scattered through the adjoining provinces of Bergamo, Brescia, Soudoro, and Como.

Our Ponti mill, at Gallavati and Solbrata Alona, is the oldest, and dates from 1810. It counts 18,000 spindles, and is the most extensive in Lombardy. The yarn spun ranges from No. 2 to No. 34. The weight and quality are established on the same footing as in England. All its product is consumed in Lombardy and Venice.

The yarns of all the Lombardian spinneries are consumed either in the fabrication of very common stuffs, made of Nos. 2, 4, 8, or 10, which the peasants carry to their homes to be worked up during the winter, making themselves their supply of cloth, or by contractors or wholesale merchants.

The merchandise fabricated by the large manufacturers may be estimated at 300 000 pieces of domestics; 6,000 pieces of velvets; 150,000 pieces of fustian; 170,000 pieces of shirtings; 150,000 pieces of cottonades; 80,000 pieces of other coarse tissues, and for consumption in our country.

The length of the piece cannot be given, for the reason that each manufacturer has his own measure; but it may be estimated at an average of sixty yards.

The principal villages of production are: Gallavate, for fustians; Busta, for domestics, fustians, and other stuffs; and Monza, for cottonades. These villages are all in the province of Milan, and it may be said that they manufacture enough for the requirements of all the other provinces of Lombardy and a good part of Venice. However, many inhabitants of the country also buy yarns of very coarse descriptions for the fabrication of heavy goods, such as socks, bonnetry, &c. The number of looms worked at Gallavate, Busta, and Monza, is estimated at 18,000, and nearly all the cultivators become weavers as soon as they have finished their field work.

The piece costs from one dollar to one dollar and a quarter, according to the fineness of quality, and there are, at the least, 5,000 families who are supplied in this manner. Labor with us is so cheap because it is thus employed at hours and seasons when there is nothing elsewhere to do, and particularly by those members of the families who do not till the soil, that is to say, by children under eight years, and by the aged people above 60 years old.

The most extensive manufacturing firms are those of our house and of M. Turati. It was the first named which introduced, in the year 1808, the fabrication of fustians into Lombardy, with which the lower classes of people are at present clothed.

Accept, sir, our most devoted salutations.

ANTONIO & ANDREA PONTI.

MILAN, *October 7, 1857.*

The importation of cotton yarns and manufactured goods, particularly those which are bleached or colored, is discouraged by the imposition of duties, which are in some cases heavy, and in others, absolutely prohibitive.

Up to the 30th June, 1856, the quantity of unbleached yarn imported, was 50,883 Zoll centners, equal to 5,615,189 pounds, upon which the duty paid was 6 florins (\$2 91) per centner; for the remainder of the year, the import amounted to 61,855 Zoll centners, or 6,826,009 pounds, on which the duty paid was 5 florins, or (\$2 42.) The total value was 6,764,280 florins, or \$2,279,675; while the total duty paid was 614,573 florins, or \$298,067.

Of bleached, but not dyed yarn, the import for the year was only 3,249 Zoll centners, or 353,543 pounds, paying a duty of 10 florins (\$4 85) the Zoll centner, and its value was 324,900 florins, or \$157,576, paying a total duty of 32,490 florins, or \$15,757. Of dyed yarn and twist, the import was 1,211 Zoll centners or 133,641 pounds. It was valued at 157,430 florins, or \$76,353, which, at the duty of 12 florins, 30 kreutzers, or \$6 06 the Zoll centner, yielded a revenue of 15,137 florins, or \$7,341.

Of this description, there were imported under "the free trade with the Zollverein States," 15,772 Zoll centners, or 1,740,520 pounds; which paid only 2 florins 30 kreutzers, or \$1 22 duty, the Zoll centner. Its value was 2,050,360 florins, or \$994,424, and the revenue derived from it amounted to 39,430 florins, or \$19,054.

On bleached, but not dyed yarns, coming in under the same arrangement with the Zollverein States, the duty is only 2 florins, 30 kreutzers, or \$1 22, while on unbleached yarns it is levied at the same rate.

Trieste being a free port, with an extensive trade with the Levant, Bosnia, Servia and Wallachia, there is a considerable demand for such qualities and descriptions of yarns, as could not, if sent into the Austrian markets, at all enter into competition with those of domestic production by reason of the enormous duties. The yarns destined for Trieste are generally put up in packages of 10 pounds English.

But jealous as the Austrian government shows itself as to competi-

tion with its domestic produce of cotton yarns and twist, it is still more so with regard to the introduction of cotton fabrics and tissues; and although it has not gone to the length that France has done, of prohibiting absolutely and in express language, their introduction within its territory, the same object is attained by the imposition of a scale of duties which are virtually prohibitive. Thus, on the most ordinary description of cotton stuffs, "raw, unbleached, undyed, and unprinted," the duty imposed amounts to 40 florins (\$19 44) the Zoll centner. On articles of middling fineness, dressed, bleached, dyed, &c., 75 florins (\$36 24) the Zoll centner. If from the States of the Zollverein, 45 florins (\$21 84.) Muslins printed, 100 florins, or (\$48 24,) the Zoll centner. If from the "free trade of the Zollverein States," 45 florins, (\$21 84.) Bobbinets, English tulles, laces and embroideries, 250 florins, or \$121 25, the Zoll centner. If from the "free trade of the Zollverein States," 200 florins, or \$97. And if from the privileged factories of Venice, 228 florins 40 kreutzers, or \$110 90.

With such duties to contend against, it is not to be wondered at that the entire importation of all such fabrics and tissues into the Austrian empire, with its 39,500,000 inhabitants, only amounted, in 1856, to 7,768 Zoll centners, or 857,237 pounds, of the value of 1,769,680 florins, or \$858,295, while the revenue amounted to 649,259 florins, or \$314,890.

SARDINIA.

Although somewhat later in the adoption of cotton spinning, and the other branches of manufacture of which our great staple furnishes the material, than many of the continental states, Sardinia exhibits a healthy state of progress, if an opinion may be formed from the consumption of cotton wool, in proportion to the population, which, at the last census, was under five millions. It must be remembered that this industry is carried on almost exclusively in Piedmont, while in Genoa, Savoy, and the island of Sardinia it is scarcely, if at all, known.

The mills are, for the most part, to be found at or near the town of Arona, on Lake Maggiore. So far as I could learn, no industrial census of the kingdom is taken, and the number of mills, spindles, looms, and employes was unknown to all those with whom I conversed on the subject. An extensive importer of cotton at Genoa was kind enough to promise me such statistics on these points as he could procure among his customers, but they have not yet come to hand.

The latest official publication relative to the import and export of cotton wool, yarns, and tissues, is the *Movimento Commerciale del 1855*, (Commercial Movement for 1855,) published by the ministry of finance in 1857, which is preceded by some preliminary observations and comparisons of results with those of former years. Of cotton it is said:

"This class is one of the most important, by value, and the number of commercial contracts to which it gives rise, and of which the united values of the importations and exportations is 40,526,512 livres,

(\$7,537,931,) with an increase of $6\frac{1}{2}$ per cent. on the last triennial mean, and of $3\frac{1}{2}$ per cent. on the import of the preceding year."

The accompanying table, marked A, compiled from the official publication above cited, will show the quantity and value of the cotton wool imported into Sardinia, and the countries whence it came. It will be seen that more than half of it was derived from the United States, while there can be no doubt that by far the greater portion of that reported as coming from France, England, Belgium, &c., was also of the growth of this country. The table marked B, also from the same official source, exhibits the import, export, and consumption of cotton for the six years beginning with 1850, and ending with 1855. The exportation of the last year named showed an increase of 23 per cent. in the triennial mean, and of 30 per cent. when compared with the year 1854. Mr. Herbreumont, the consul at Genoa, kindly furnished me with a statement of the quantities of cotton imported direct into that city from ports of the United States during the year 1856, and the three quarters of 1857, ending with the 30th September, by which it appears that the amount received in 1856 was 39,659 bales, which, at 450 pounds per bale, (a moderate estimate,) would amount to 17,844,300 pounds; which, with the supplies derived from France, England, &c., would go to show a largely increased consumption, compared with the previous year.

Up to September 30, 1857, the direct importation had reached 25,064 bales, which, at the average above assumed, would give 11,278,800 pounds of the raw material from the United States alone. There was, probably, a falling off in the receipts of this year in Sardinia, owing to the short crop of our country and the high prices, as was the case in other European countries.

The export of raw cotton in the year 1855 was, altogether, 4,134,555 kilogrammes, or 9,096,021 pounds; of which 3,722,780 kilogrammes, or 8,290,116 pounds, were sent into the Austrian empire. The quantity, therefore, left for consumption was 9,921,639 pounds.

If the estimate of 40 pounds of the raw material per year, to each spindle, be applied to Sardinia, the result would be 260,000, which is probably near the truth.

From all I could learn, the qualities of the yarns spun, tissues woven, wages paid, &c., resemble closely the same branches of the industry in Lombardy.

The duty on cotton yarns imported is regulated according to the degree of fineness, it being the object of the government to protect its own spinners against competition in the home market. Thus, on unbleached yarn below No. 20, it is 20 centimes, (about $3\frac{7}{10}$ cents;) if between No. 20 and No. 30, 30 centimes, (about $5\frac{6}{10}$ cents;) if between No. 33 and 45, 40 centimes, (about $7\frac{4}{10}$ cents;) if between 46 and 60, 50 centimes (about $11\frac{1}{10}$ cents) the kilogramme, of $2\frac{1}{2}$ pounds.

On twisted yarns, up to No. 32, the duty is also $9\frac{3}{10}$ cents the kilogramme, and in all other numbers, 70 centimes (about 13 cents) the kilogramme. On bleached or dyed yarns, of whatsoever number or quality, the duty is 80 centimes, about 15 cents, the kilogramme.

The accompanying table, marked C, exhibits the imports of

cotton yarns, tissues, and other fabrics during the years named. It is also compiled from the "Commercial Movement for 1855."

It is anticipated by the merchants at Genoa that the importations of cotton into that port, direct from the United States, or other countries of its growth, will continue to increase, not only to meet a domestic demand, but also to supply, by means of the Sardinian railroad, the wants of the spinners in the Italian provinces of Austria, and in those of Tyrol and the Vorarlberg.

American shipmasters, however, complain no little at the want of liberality on the part of the authorities, as regards the port regulations, and the monopolies, with their exorbitant charges, which they sanction.

There are few or no direct exchange operations between Sardinia and the cotton marts of the United States. Payments are made by drafts on London or Paris. The chief articles of export are fruits, olive oil, silk, rice, wool, wine, grain, &c.

A.

A statement of the cotton wool imported into Sardinia, from all quarters, during the year 1855, with the declared commercial values; and also the official values, &c., &c. Weights and values being reduced to those of the United States.

Countries whence brought.	GENERAL COMMERCE.						SPECIAL COMMERCE.					
	Mode of transport.			Total.	Declared commercial value.	Off. value of importation. Total.	Mode of transport.			Total.	Declared commercial value.	Official value.
	By land.	By Nat. C. H.	By For. C. C.				By land.	By Nat. C. H.	By For. C. H.			
France	525,890	314,195	703,826	1,543,912	\$170,240	\$294,747	525,910	314,195	703,802	1,543,907	\$170,419	\$294,746
Belgium	30,290	.....	.....	30,290	3,674	5,783	30,290	.....	.....	30,290	3,674	578,256
England .....	.....	414,147	3,655,639	4,059,785	454,992	775,050	.....	400,077	3,336,845	3,736,922	422,998	713,412
The Duchies .....	.....	105,591	22,009	127,600	14,311	24,360	.....	105,591	22,009	127,600	14,301	24,360
Switzerland	111,272	.....	.....	111,272	12,250	21,243	111,272	.....	.....	111,272	12,251	21,243
Tunis .....	.....	352	.....	352	18	67	.....	352	.....	352	18	67
Turkey .....	.....	6,292	5,060	11,352	3,321	2,167	.....	6,292	5,060	11,352	1,321	2,167
United States	51,845	1,709,299	9,860,653	11,621,797	1,306,435	2,221,706	51,845	1,709,299	9,860,653	11,621,797	1,306,425	2,218,707
Brazil .....	.....	8,040	.....	8,040	707	1,344	.....	8,040	.....	8,040	707	1,344
South America .....	.....	159,971	16,500	176,471	18,991	33,690	.....	159,997	10,560	170,531	18,424	32,556
Central America .....	.....	.....	7,084	7,084	744	1,352	.....	.....	7,084	7,084	3,150	1,352
North America .....	.....	.....	557,700	557,700	59,241	86,310	.....	.....	557,500	557,500	59,241	106,470
East Indies .....	.....	.....	765,006	765,006	83,988	146,046	.....	.....	765,006	765,006	83,988	146,046
Total	719,297	2,717,787	15,593,477	19,020,661	2,126,902	3,613,865	719,317	2,703,853	15,268,519	18,691,653	2,096,917	4,140,736

NOTE.—In the kingdom of Sardinia there exists the same distinction as general and special commerce, as in France, Belgium, Tuscany, &c.

B.

A statement of the importation, exportation, and consumption of cotton-wool during the years 1850 to 1855 inclusive, derived from the "Commercial Movement" of 1855; the weights being reduced to United States pounds.

Years.	Importation.	Exportation.	Consumption.
1850 -----			7,210,940
1851 -----	19,019,772	9,172,073	9,845,939
1852 -----	20,313,018	6,722,418	13,590,590
1853 -----	21,772,428	8,067,110	14,365,318
1854 -----	17,490,041	6,723,121	10,766,930
1855 -----	19,017,660	9,096,021	9,923,639

C.

A statement of the quantity of cotton yarns, tissues, and other fabrics imported into Sardinia during the years specified, taken from the "Commercial Movement" for 1855, and the weights reduced to those of the United States.

Years from—	Cotton yarns.	Tissues of cotton, raw or bleached.	Tissues dyed.	Tissues printed.	Cotton velvet.	Ordinary bonnetry.
1844 to 1850 ----	218,238	298,712	442,504	566,082	131,204	10,413
1851 -----	174,220	661,602	714,459	978,385	200,367	34,434
1852 -----	189,455	602,261	786,279	1,414,903	207,522	33,944
1853 -----	175,182	562,120	820,653	1,279,989	161,113	32,555
1854 -----	163,238	590,253	859,883	1,206,115	155,784	39,197
1855 -----	183,588	735,108	949,432	1,340,379	187,557	52,490

BELGIUM.

There exists no official return of the number of spinning mills, spindles, looms, &c., in the kingdom. An industrial census, very imperfect in execution, was taken in 1846, but little reliance seems to be placed in the information which it afforded; besides which there has unquestionably been a marked progress in the manufacture of cotton since that date. M. Romberg, director of the division of industry of the ministry of the interior, in his Annual of Industry, Commerce and Banking in Belgium, the first volume of which was published last year, makes an approximative estimate, based on the

mean consumption of raw cotton at the time he wrote, 22,200,000 pounds, and in the supposition that each spindle consumed yearly forty-four pounds of the raw material, whereby he arrives at the conclusion that their number is about 500,000. It has already been seen that cotton spinning was a branch of Belgian industry previous to the year 1801, when the first mule jenny was introduced at Ghent. The history of that and other departments of cotton manufacture in the country, down to the period of the breaking up of the first French empire, is to be traced in what has already been said on the same subjects under the head of France. As a portion of Holland, and since her independence of that kingdom, Belgium does not appear to have advanced so rapidly in this as she has in several other branches of industry, although it has now attained to considerable importance, and is on the increase both as to the extent of consumption of raw material and the value of its products.

The accompanying table, A, is a statement of the quantities of cotton wool imported during the six years, beginning with 1850 and ending with 1855, with the countries whence it came. The total value of the importations in 1855 was 13,541,941 francs, or 2,511,000 dollars. Of the 10,534,318 kilogrammes, or 23,175,500 pounds, the value was 11,418,341 francs, or 2,123,811 dollars; and of the 1,784,964 kilogrammes, or 3,926,921 pounds in transit, it was 730,407 dollars.

The quantities of cotton wool in transit during the years 1850 to 1855, inclusive, was as follows :

1850.....	2,580,538 pounds.
1851.....	4,140,697 “
1852.....	14,230,153 “
1853.....	8,044,399 “
1854.....	6,836,437 “
1855.....	3,926,921 “

The entire importation of cotton yarn in 1855 amounted to 1,662,249 kilogrammes, or 3,656,948 pounds, of the value of 6,844,095 francs, or 1,273,002 dollars. Of this, 194,723 kilogrammes, or 428,391 pounds, of the value of 1,572,273 francs, or 292,443 dollars were consumed in the country, and 1,462,205 kilogrammes, or 3,216,851 pounds, of the value of 5,258,430 francs, or 1,015,268 dollars, was in transit. By far the greater portion of this yarn was neither twisted nor dyed, and of English production.

Of the entire exportation for the year, which amounted to 1,784,608 kilogramme, or 3,926,127 pounds, of the value of 6,323,653 francs, or 1,236,199 dollars, the Belgian yarns amounted to but 323,403 kilogrammes, or 711,487 pounds, of the value of 1,065,223 francs, or 198,131 dollars. Of these, 69,683 kilogrammes, or 153,303 pounds were not twisted or dyed, and 252,649 kilogrammes, or 555,828 pounds, of the value of 164,474 dollars, were twisted and dyed; and 71 kilogrammes, or 156 pounds, of the value of 6,745 francs, or 1,254 dollars, were of various descriptions of yarns above No. 140. Much the greater part of these yarns were sent into Prussia.

M. Romberg, in the work above cited, says: “Belgium imports

and exports cotton yarns to an amount nearly equal on each side ; (approximatively, 200,000 kilogrammes per year ;) but, as to their value, the balance leans very sensibly in favor of the importation. The yarns which we receive from abroad are of fine numbers, or twisted and dyed, while we send out above all ordinary qualities. One would not be far from the truth in estimating the total value of the yarns produced by our factories at 26,500,000 francs, or 4,929,000 dollars." He estimates the average value of the yarns produced at 2 francs 50 centimes, or 47 cents, the kilogramme, of $2\frac{1}{2}$ pounds, which corresponds with the information obtained by me from several of the spinners at Ghent, which is the seat of that branch of industry. M. Romberg also adopts the opinion that fabrication quadruples the value of the raw material used, and considers that the value of Belgium cotton manufactures, on this hypothesis, would reach from 48,000,000 to 50,000,000 francs, equal to from 8,928,000 to 9,300,000 dollars.

Of cotton tissues, the total import in 1855 was 774,504 kilogrammes, or 1,703,909 pounds, of the value of 11,396,493 francs, or 2,101,800 dollars ; of which 240,731 kilos, or 529,608 pounds, of the value of 3,486,241 francs, or 648,441 dollars, were consumed, and 533,263 kilos, or 1,173,179 pounds, of the value of 7,903,459 francs, or 1,469,400 dollars, were in transit. The export of the same was 2,222,678 kilos, or 4,889,892 pounds, of the value of 18,882,183 francs, or 3,496,800 dollars ; of which 1,689,415 kilos, or 3,716,713 pounds, of the value of 10,978,734 francs, or 2,027,400 dollars, was of domestic production. I was told that the articles principally produced were twills, pantaloon stuffs, and bleached or unbleached domestics.

The above figures, except where credited to the annual of M. Romberg, are official, and derived from the statement of the commerce of Belgium for the year 1855, published in the year 1857, by the ministry of finance. The statement for the year 1856 had not appeared up to the 1st of November last.

At Antwerp, the custom-house authorities were kind enough to furnish the following statement of the import of cotton into that port between January 1 and October 31, 1857. The weights are reduced to our standard.

For consumption.

	<i>Pounds.</i>
From Sweden.....	65,300
“ England.....	5,305,573
“ English East Indies.....	3,333,585
“ United States.....	11,414,955
“ Hayti.....	63,668
“ Brazil.....	42,242
Total.....	<u>20,225,323</u>

In warehouse.

	<i>Pounds.</i>
From the United States.....	1,098,592

In transit.

From England.....	232,747
“ United States.....	40,759
Total.....	273,506

The number of people employed in the different branches of the cotton manufacture is estimated by M. Romberg to be from 26,000 to 28,000. The census of 1855 gave the entire population of Belgium at 4,607,065.

At Ghent, I visited the mills of Messrs. Lonsberg and Jules de Hemptieme; the first named was then running 41,000 spindles, which were soon to be increased to 70,000, consuming Louisiana cotton of the lower classifications which were converted into yarns No. 30. His importations were mostly direct. The loss on American cotton for spinning was ordinarily 10 per cent. ; on good qualities of Surat, about 15 per cent. ; on the inferior qualities, 25 per cent. The waste on American cotton is often mixed with East India cotton to make heavy, coarse yarns. Of Egyptian, Surinam, and Brazilian cotton the consumption is insignificant. Weaving is also carried on, the tissues produced being of ordinary low-priced qualities, particularly figured or *façonnés* patterns. Number of hands employed between 1,200 and 1,300 ; wages for ordinary hands: men, two francs, (37 cents;) spinners, from three to four francs, (55 to 74 cents;) weavers, from two francs to two and a half francs (37 to 47 cents) per day. For women the wages are 25 per cent. less.

Mr. De Hemptieme consumes East India cotton exclusively, which he converts into yarns from No. 4 to No. 18, with a loss in the raw material of 20 per cent. Delivered at the mill, it costs about 6d the pound, and he thinks that its consumption will rapidly increase in Belgium, as American has reached so high a price. The yarns spun are worth, on the average, two francs fifty centimes the kilogramme, (46½ cents for 2½ pounds,) with a ready sale. The wages paid are, for men, from twelve to thirteen francs (\$2 23 to \$2 40) per week ; for boys from four to six francs, (74 cents to \$1 12;) for women drawing frames, seven francs, (\$1 30,) and on robinet frames, ten to thirteen francs (\$1 86 to \$2 42) per week.

On all raw cotton imported into Belgium there is no duty whatever levied. On yarns, simple and undyed, from England, valued by law at $2\frac{5}{100}$ francs (46½ cents) the killogramme, the duty is $84\frac{8}{100}$ francs (\$15 78) the 100 kilogrammes, or 221 pounds—if from other countries they are duty free. On twisted and dyed yarn the duty valuation is ten francs (\$1 86) the kilogramme, and the duty 106 francs (\$19 72) per

100 kilogrammes, or 221 pounds. On simple and double twist, unbleached, bleached, or dyed, above No. 140 in fineness, the valuation is 95 francs (\$17 67) the kilogramme, and the duty five francs (93 cents) per 100 kilogrammes, or 221 pounds.

On cotton tissues, if unbleached or bleached, the valuation is 14 francs (\$2 60) the kilogramme, and the duty 180 francs 20 centimes (\$33 52) the 100 kilogrammes. On dyed and printed tissues, if of Prussian or English fabrication, the valuation is 15 francs (\$2 79) the kilogramme, and the duty 325 francs (\$60 45) the 100 kilogrammes; if of French fabrication, the duty is 212 francs (\$39 43) the 100 kilogrammes. From all other countries these articles are free of duty.

Cotton spinning, like all other branches of industry, is prosperous and advancing with the Belgians. Traverse the country in whatever direction he may, the traveller scarcely ever loses sight of the tall chimneys of the factories, and he is frequently at a loss whether to admire most its evidences of high agricultural advancement or those of manufacturing activity which meet him at every turn.

To James G. Clarke, esq., acting United States chargé d'affaires at Brussels, and to M. Lambermont, of the ministry of finance, I was much indebted for the facilities and information they procured me.

A.

Statement of the cotton wool imported into Belgium during the years specified; compiled from the "Tableau Général du Commerce avec les pays étrangers pendant l'année, 1855," in United States pounds.

Whence imported.	1850.	1851.	1852.	1853.	1854.	*1855.
	<i>Pounds.</i>	<i>Pounds</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>	<i>Pounds.</i>
England	7,303,861	9,270,408	10,297,493	12,203,407	14,061,953	11,130,678
Netherlands	127,774	52,666	193,424	227,438	2,642,407	1,294,075
France	110,279	234,464	304,638	413,750	355,440	1,536,603
Sardinia						55,143
English East Indies						170,720
United States	14,398,329	11,791,434	15,814,482	11,700,130	10,626,645	12,530,126
Hayti and Venezuela	40,143	26,200	26,345	18,370	93,740	53,350
Other countries	22,842		11,590		19,547	39,065
Total pounds	22,003,228	21,375,172	36,647,972	24,563,097	27,799,732	26,809,760

* For the years 1850 to 1854, inclusive, the above figures represent the importation under the head of "special commerce," *i. e.*, where the importation was declared at the period of entry to be for consumption. For the year 1855 the figures represent the importation under the head of "general commerce," *i. e.*, without regard to the ulterior destination of the article.

CONCLUSION.

In conclusion, it may be said that it would be difficult to over-estimate the importance of cotton in the movement of the industry and commerce of the civilized world. Since the inventions of Arkwright and Watt in England, and Whitney in our own country, its manipulation and fabrication have become so comparatively easy and cheap, and its adaptation to supply the wants or the luxuries of man have proved to be so multifarious, that the question of an adequate supply of it to the growing demand has become one of the very highest importance, being exceeded in interest by that of the cereals alone. Its influence in the well-being of the masses by furnishing employment, sustenance, and cheap clothing, has long since been fully admitted; and such has been the impetus afforded by it to the invention and improvement of manufacturing machinery, that, in his work, before quoted, M. Audiganne remarks that, "It was certainly a curious sight, that, of the different aliments afforded by cotton to labor, and the services rendered to man at this day by this substance, of which the consumption has increased tenfold four or five times in less than sixty years. Cotton is manufactured among the greater part of the nations that figured at our side in the Palace of Industry. Nearly all had sent there samples of their fabrication—samples more or less numerous, more or less remarkable, but always worthy of attentive examination. *The degree of advancement of each people in the career of industry might be measured by its skill in the treatment of cotton.*"

Illustrating its commercial and political influence as between the United States and Great Britain, Dr. Engel says of it: "That England and the United States are bound together by a single thread of cotton, which, weak and fragile as it may appear, is, nevertheless, stronger than an iron cable."

No wonder, then, that the question of the adequate supply of this mighty and all-powerful agent soars at this day so far above many which, at the beginning of the present century, far outranked it in their bearings upon the interests of civilized man; and it may not, in this connexion, be deemed out of place to allude, briefly, to the history of the supply in Great Britain, which has long been the principal receiver of the raw material, not only to meet her own growing demands, but to be distributed, to some extent, among those European countries which commercial supremacy has made tributary to her.

Cotton planters and manufacturers are alike under great obligations to Mr. Joseph Rudworth Sharp, F. H. S., of London, for his valuable tables, published in September last, which exhibit in a clear and comprehensive manner the gross amount of receipts per year, with quinquennial averages, and the countries of production of the cotton wool received in the United Kingdom, &c., from the year 1821 up to 1855. These tables are admirably arranged, and must have cost an immense amount of labor to their compiler; and with full acknowledgment of the very great aid they have been to me, the second of them is annexed hereto, as affording, in a clear and succinct form, the best information attainable on that subject.

It will be seen from this statement how vast has been our own contribution of the raw material to Great Britain and Europe generally, and how much more reliable as a source of supply our cotton fields are than those of any or all other countries, as their production between 1851 and 1855 was five times that of the East Indies, and that while during that period all other countries exported to Great Britain 937,024,275 pounds, our own sent her 3,424,502,024 pounds, or more than three and a half times as much.

In his first table, Mr. Sharp sets down the import from the United States into the United Kingdom, in 1856, at 780,040,016 pounds, that from the East Indies at 180,496,624 pounds, and the total from all other countries than the United States at 243,846,512 pounds, leaving a balance in our favor of 536,193,504 pounds, and also showing that in that year also we contributed more than three times as much to European supply than all other countries combined, while it must be remembered that our domestic consumption was advancing so rapidly as to require for its use 652,739 bales, which, estimated at 450 pounds each, were equal to 293,732,550, or more than the import into England that year from all other countries than our own.

Mr. Samuel S. Littlefield, the editor of the New Orleans Price Current, than whom there is no better informed or more reliable authority on the subject of cotton and the cotton trade, in the Union, estimates the value of our crop of 1857—2,931,519 bales, after making all allowances for differences in their weights in different sections of the country, at an average of \$50 per bale, making the total sum of \$146,975,950. This gentleman has also furnished me with much interesting information, and several valuable suggestions.

From what has been said under the various heads of this report, the following conclusions as to the influence of raw cotton among the nations who are our chief customers for it may be drawn :

1st. That it contributes vastly to their social well-being by furnishing labor, sustenance, and cheap and comfortable clothing to many thousands of their subjects or citizens.

2d. That to commerce it contributes immensely by furnishing a great variety of articles, by which its exchanges are in a considerable degree regulated, and large profits continually realized. That to capital it offers the means of profitable investment and returns, and aids greatly in its accumulation.

3d. That its political influence arises from the fact, that by opening and extending commercial relations, between different nations, it has created sympathies and ties of common interest, which makes the policy of peace and its attendant blessings one far more easy to maintain than was once the case ; that it adds to the national wealth and resources, and by furnishing employment and support to many thousands who might otherwise be without either, it makes contented those who would, through idleness or suffering, become burdens to the state.

4th. That the permanent and adequate supply of raw cotton thus becomes to Great Britain and continental Europe, a subject of vital importance, and indeed, of absolute necessity ; and that any considerable diminution in the crop of the United States, would cause the

gravest inconveniences, while the occurrence of any state of things whereby it should be entirely cut off, would be followed by social, commercial, and political revulsions, the effects of which can scarcely be imagined.

With high consideration, I am, sir, your obedient servant,

JOHN CLAIBORNE.

WASHINGTON CITY, *January 22, 1858.*

An abstract of the trade in cotton wool, showing the import into, export from, and consumption in this and the several foreign countries, (except the consumption in the United States,) and the export of cotton yarn and cotton manufactured goods from this country, with the respective total amounts for the seven several terms of five years each, from 1821 to 1855, both inclusive, and the grand totals and annual averages for the entire period of thirty-five years. Compiled by Joseph Rudworth Sharp, F. H. S., Myddleton Square, London, September, 1857.

TOTAL QUANTITY AND VALUE OF COTTON EXPORTED FROM THE UNITED STATES.

1.	2.	3.	4.	5.	5*.	6.	7.
QUINQUENNIAL PERIODS.	SEA ISLAND.	ALL OTHER SORTS.	ALL SORTS.	ESTIMATED VALUE AS SHIPPED.		Value per lb. in Am. currency.	Value per pound in sterling.
	Total quantity in each period.	Total quantity in each period.	Total quantity in each period.	Total value in each period	Reduced to sterling money.		
Years included.	Pounds.	Pounds	Pounds.	Dollars.	£.	Cents and decimal parts.	Pence and decimal parts.
From 1821 to 1825 -----	53,922,389	708,188,951	762,111,340	123,432,112	25,715,023	16. 19	8. 95
From 1826 to 1830 -----	53,382,541	1,219,349,740	1,272,732,281	133,122,182	27,733,788	10. 46	5. 23
From 1831 to 1835 -----	44,036,795	1,651,933,614	1,695,970,409	207,614,983	43,253,121	12. 24	6. 12
From 1836 to 1840 -----	35,004,803	2,586,355,611	2,621,360,414	321,191,121	66,914,817	12. 25	6. 12
From 1841 to 1845 -----	36,495,303	3,407,262,371	3,443,757,674	256,846,755	53,507,741	7. 05	3. 52
From 1846 to 1850 -----	43,612,376	3,507,423,941	3,551,036,317	296,563,066	61,783,972	8. 35	4. 17
From 1851 to 1855 -----	54,687,909	5,073,547,896	5,128,235,805	491,169,517	102,326,983	9. 58	4. 79
Grand totals for the whole period of 35 years----	321,142,116	18,154,062,124	18,475,204,240	1,829,939,736	*381,237,445	-----	-----
Annual averages for the whole period of 35 years--	9,175,489	518,687,489	527,862,978	52,283,992	10,892,498	9. 90	4. 95

* Of this sum it would be difficult to affix the exact value shipped to this country, but as the quantity received by us from the United States constitutes 70 per cent. (69.93, see column 16) of their entire export, and as the Sea Island cotton, the most valuable imported, is chiefly consumed here, it would be a reasonable computation to estimate the British amount of this value at something more than the exact arithmetical proportion, or say, 270,000,000 sterling, being an average, for the whole term, of nearly 8,000,000 per annum as valued in America.

ABSTRACT—Continued.

TOTAL IMPORTS OF COTTON INTO THE UNITED KINGDOM FROM ALL COUNTRIES.

QUINQUENNIAL PERIODS.	8.	9.	10.	11.	12.	13.
	Total imports in each period from the United States.	From the East Indies.	From the West Indies.	From the Brazils.	From all other countries.	Total imports in each period from all other countries.
Years included.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.	Pounds.
From 1821 to 1825 -----	569,130,984	64,646,326	38,932,141	125,785,676	45,667,041	844,162,164
From 1826 to 1830 -----	867,608,058	111,443,139	25,880,412	121,700,991	37,913,215	1,164,545,815
From 1831 to 1835 -----	1,230,256,026	168,088,818	10,636,039	124,546,947	36,214,773	1,569,742,603
From 1836 to 1840 -----	1,841,159,598	291,884,429	6,953,716	104,657,072	59,326,171	2,303,980,986
From 1841 to 1845 -----	2,490,879,279	403,147,693	6,488,885	91,811,676	68,699,263	3,061,026,814
From 1846 to 1850 -----	2,494,453,334	392,289,975	3,809,447	115,722,736	68,356,431	3,074,629,923
From 1851 to 1855 -----	3,424,502,072	654,412,793	2,378,215	114,317,428	165,915,539	4,361,526,047
Grand totals for the whole period of 35 years...	12,917,989,369	2,085,911,173	95,078,855	798,542,526	482,092,433	16,379,614,352
Annual averages for the whole period of 35 years.	369,085,411	59,597,462	2,716,539	22,815,501	13,774,070	467,988,981

QUINQUENNIAL PERIODS.	14.	15.	16.	17.	18.	19.
	Total quantity exported from the United Kingdom in each period.	Total quantity remaining for home consumption in each period.	Per centage of exports from the United States to the United Kingdom.	Per centage of exports from the United States to all other countries.	Total quantity shipped from the United States to all other ports than the United Kingdom.	Total quantity exported from the United States and United Kingdom to all foreign countries.
Years included.	Pounds.	Pounds.	Per cent.	Per cent.	Pounds.	Pounds.
From 1821 to 1825 -----	73,482,133	770,680,031	74.68	25.32	192,980,356	266,462,489
From 1826 to 1830 -----	98,829,957	1,065,715,858	68.17	31.83	405,124,223	503,954,180
From 1831 to 1835 -----	114,942,074	1,454,800,529	72.54	27.46	465,714,383	580,656,457
From 1836 to 1840 -----	179,517,730	2,124,463,256	70.24	29.76	780,200,816	959,718,546
From 1841 to 1845 -----	210,683,744	2,850,343,070	68.36	31.64	952,878,375	1,163,562,119
From 1846 to 1850 -----	416,268,048	2,658,361,875	70.25	29.75	1,056,582,983	1,472,851,031
From 1851 to 1855 -----	620,006,256	3,741,519,791	66.78	33.22	1,703,733,733	2,323,739,989
Grand totals for the whole period of 35 years ----	1,713,729,942	14,665,884,410	-----	-----	5,557,214,869	*7,270,944,811
Annual averages for the whole period of 35 years..	48,963,713	419,025,269	69.93	30.07	158,777,567	207,741,280

* It is not pretended that this is the *extreme amount* of consumption in foreign countries, since some of them may possibly obtain limited quantities direct from the Brazils, the Mediterranean, or elsewhere, and, in the case of France and Holland especially, from their own colonial possessions. But the quantities thus obtained will be of comparatively trifling extent, and cannot materially change the relative proportions or per centages of entire consumption in the United Kingdom and foreign countries, as shown in columns 19a and 19b.

It may be well shortly to state here that the quantity of cotton worked up in the United States last year was 652,739 bales, which, at an average of 400 pounds per bale, gives 261,000,000 pounds so manufactured in that country.

ABSTRACT—Continued.

QUINQUENNIAL PERIODS.	19a.	19b.	20.	21.	22.
	Per centage of total consumption in the United Kingdom.	Per centage of total consumption in all foreign countries except the United States.	Quantity of cotton yarn exported from the United Kingdom to all parts of the world.	Declared value of cotton yarn exported.	Declared value of cotton manufactured goods exported.
Years included.	Per cent.	Per cent.	Pounds.	£	£
From 1821 to 1825	74. 31	25. 69	141, 747, 937	13, 971, 492	72, 565, 552
From 1826 to 1830	67. 89	32. 11	263, 650, 779	18, 742, 936	67, 199, 504
From 1831 to 1835	71. 47	28. 53	369, 807, 417	24, 319, 406	71, 464, 481
From 1836 to 1840	68. 88	31. 12	530, 399, 451	34, 467, 678	84, 127, 222
From 1841 to 1845	71. 00	29. 00	674, 699, 531	36, 184, 222	84, 366, 254
From 1846 to 1850	64. 35	35. 65	698, 867, 302	32, 855, 652	93, 791, 134
From 1851 to 1855	61. 69	38. 31	749, 611, 755	34, 106, 092	125, 131, 296
Grand totals for the whole period of 35 years	-----	-----	3, 428, 784, 172	194, 647, 478	598, 645, 443
Annual averages for the whole period of 35 years	66. 85	33. 15	97, 965, 262	5, 561, 357	17, 104, 156

